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ABSTRACT

Designed to help teachers provide students with various word processing skills, this teacher's guide contains nine units of instruction. The units address various skills that are prerequisite for entry-level word processing positions, including concepts and theories of word processing, language usage, mathematics, machine transcription and dictation, proofreading, and using resources and references. Included in each unit are the following materials: (1) an objective sheet, containing unit and specific objectives along with listings of subject material to be covered and the competencies required by students to achieve the unit objective; (2) a notes-to-the-instructor sheet, providing suggestions for gathering reference materials and supplies, designing and ordering visual aids, arranging for field trips and/or guest speakers, and presenting the information; (3) information sheets that are applicable for group or individualized instruction; (4) transparency masters; (5) activity sheets; (6) answer sheets; and (7) unit tests. (MN)

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Vocational Office Education

Units of Instruction

INTRODUCTION TO WORD PROCESSING

Prepared by Elaine Burrow

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INTRODUCTION

As the use of word processing in businesses increases, the demand for qualified personnel continues to grow. Business and industry have identified the following basic prerequisite skills for entry-level word processing positions: (1) typing, (2) language usage, (3) machine transcription and dictation, (4) proofreading, (5) mathematics, (6) use of resources and references, and (7) concepts and theories of word processing. Competencies in these skills should be achieved by each student prior to training on sophisticated word processing equipment.

This publication contains nine units of instruction designed to help teachers provide students with six of the seven prerequisite skills identified. The units address the following topics:

Concepts and theories of word processing, including the microcomputer

Language usage

Mathematics

Machine transcription and dictation

Proofreading

Using resources and references

The publication, TYPING, may be obtained from the Occupational Curriculum Laboratory to teach this skill.

A teacher's guide and student manuals are available; the teacher's guide contains information and suggestions for using each of the units. Additional information and activities may be added if necessary to meet the individual needs of each student.

Student manuals should be provided for each student's use in completing the units; these same manuals can be used as resources by the students as they progress through the program.

INTRODUCTION TO WORD PROCESSING

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USE OF MATERIALS

The nine units of instruction contained in this publication cover information for training students for entry-level positions in word processing. Included in each unit of instruction are an objective sheet, notes to the instructor, information sheets, transparency masters, activity sheets, a unit test, and answer sheets.

The OBJECTIVE SHEET contains unit and specific objectives which show the subject material to be covered and the competencies required by the student to achieve the unit objective. The objective sheet may be used by the instructor in preparing lesson plans, in determining course objectives for the programs, and in helping students to understand and work from an organized course outline.

The NOTES TO THE INSTRUCTOR sheet provides suggestions for teaching the unit. Suggestions are given for gathering reference materials and supplies, designing bulletin boards, ordering audio-visual aids and magazines, arranging for field trips and/or guest speakers, and presenting the information. A list of resources and references is provided for ordering supplemental materials if necessary.

The INFORMATION SHEETS contain current data necessary for meeting the objectives of the unit and are applicable for group or individual instruction. TRANSPARENCY MASTERS are provided when appropriate and are designed to present new material or to reinforce information presented in the unit. These transparency masters are also included as information sheets in the student manuals and may be used as student handouts.

The ACTIVITY SHEETS are included with each unit to provide opportunities for students to apply the information presented in the unit. These activities may be completed during the class period or they may be assigned for homework where applicable. ANSWER SHEETS are provided to check the student's progress.

The UNIT TEST is designed to test the student's comprehension of the information presented in the unit and to measure the student's achievement of each specific objective listed on the objective sheet. The test may be given as an additional activity or it may be administered upon completion of the unit. Answers are provided for checking the test.

To assist in providing appropriate, up-to-date instruction for your students, localize and personalize the units. This may be achieved by: (1) using resources and references found in your community, (2) arranging for guest speakers and field trips to show the students how the skills learned in the classroom are applied in the local businesses, (3) working with your advisory committee, and (4) obtaining samples of materials such as forms, letterhead, file folders, etc., used by the local businesses. Make each unit relevant to work situations.

Progress Chart for: INTRODUCTION TO WORD PROCESSING

____
NAME

		DATE COMPLETED
UNIT I		
	Information Sheet 1--Concepts of Word Processing	
	Activity Sheet 1--Terminology	
	Activity Sheet 2--Terminology	
	Information Sheet 2--Careers in Word processing	
	Activity Sheet 3--Job Titles	
	Activity Sheet 4--Interview	
	Activity Sheet 5--Skills and Attitudes	
	Activity Sheet 6--Job Duties	
	Activity Sheet 7--Self-Evaluation	
	Activity Sheet 8--Career Openings	
UNIT TEST		
OBJECTIVE	To identify terminology, concepts, and careers in word processing.	
UNIT II		
	Information Sheet 1--Input Equipment	
	Activity Sheet 1--Terminology	
	Information Sheet 2--Output Equipment	
	Activity Sheet 2--Terminology	
	Activity Sheet 3--Categories of Equipment	
	Activity Sheet 4--Components	
	Information Sheet 3--Reproduction and Distribution Equipment	
	Activity Sheet 5--Terminology	
UNIT TEST		
OBJECTIVE	To identify equipment used in word processing systems.	

		DATE COMPLETED
UNIT III		
	Information Sheet--Word Processing Procedures	
	Activity Sheet 1--Terminology	
	Activity Sheet 2--Equipment Categories	
	Activity Sheet 3--Document Production Cycle	
UNIT TEST		
OBJECTIVE	To classify and sequence procedures used in word processing.	
UNIT IV		
	Information Sheet 1--Overview of Micro-Computers	
	Activity Sheet 1--Research	
	Information Sheet 2--Types of Computers	
	Activity Sheet 2--Terminology	
	Information Sheet 3--Parts of a Computer	
	Activity Sheet 3--Terminology	
	Information Sheet 4--Peripheral Devices	
	Activity Sheet 4--Terminology	
	Activity Sheet 5--Peripheral Devices	
	Information Sheet 5--Computer Languages	
	Activity Sheet 6--Terminology and Software	
	Information Sheet 6--Microcomputers	
	Activity Sheet 7--Equipment Components	
UNIT TEST		
OBJECTIVE	To identify computer terminology, equipment, and language.	
UNIT V		
	Information Sheet 1--Grammar Activity Sheet 1--Identifying Verbs	
	Activity Sheet 2--Identifying Nouns and Pronouns	
	Activity Sheet 3--Identifying Pronouns	
	Activity Sheet 4--Choosing Personal Pronouns	
	Activity Sheet 5--Identifying Adjectives and Adverbs	

		DATE COMPLETED
UNIT V		
	Activity Sheet 6--Identifying Prepositions	
	Information Sheet 2--Spelling	
	Activity Sheet 7--Spelling	
	Activity Sheet 8--Spelling	
	Activity Sheet 9--Spelling	
	Activity Sheet 10--Spelling	
	Activity Sheet 11--Spelling	
	Information Sheet 3--Punctuation	
	Activity Sheet 12--Inserting Punctuation Marks	
	Activity Sheet 13--Inserting Punctuation Marks	
	Activity Sheet 14--Inserting Punctuation Marks	
	Information Sheet 4--Capitalization and Expression of Numbers	
	Activity Sheet 15--Capitalization	
	Activity Sheet 16--Capitalization	
	Activity Sheet 17--Expression of Numbers	
	Information Sheet 5--Abbreviations	
	Activity Sheet 18--Abbreviations	
	Information Sheet 6--Writing Sentences	
	Activity Sheet 19--Identifying Subjects and Verbs	
	Activity Sheet 20--Selecting Verbs	
	Activity Sheet 21--Writing Sentences	
UNIT TEST		
OBJECTIVE	To identify and apply correct language usage skills in business correspondence.	
UNIT VI		
	Information Sheet--Machine Transcription	
	Activity Sheet 1--Practicing Dictation Techniques	
	Activity Sheet 2--Practicing Transcription Techniques	
UNIT TEST		

		DATE COMPLETED
UNIT VI		
OBJECTIVE	To operate dictation/transcription equipment.	
UNIT VII		
	Information Sheet 1--Terms and Definitions	
	Activity Sheet 1--Terms and Definitions	
	Information Sheet 2--Working With Whole Numbers	
	Activity Sheet 2--Working With Whole Numbers	
	Information Sheet 3--Working With Decimals	
	Activity Sheet 3--Working With Decimals	
	Information Sheet 4--Working With Fractions	
	Activity Sheet 4--Working With Fractions	
	Information Sheet 5--Computing Percentages	
	Activity Sheet 5--Computing Percentages	
UNIT TEST		
OBJECTIVE	To add, subtract, multiply, and divide whole numbers, fractions and numbers containing decimals.	
UNIT VIII		
	Information Sheet--Proofreading	
	Activity Sheet 1--Proofreader's Marks	
	Activity Sheet 2--Using Proofreader's Marks	
UNIT TEST		
OBJECTIVE	To recognize proofreader's marks and use them in editing.	
UNIT IX		
	Information Sheet--Using Resources and References	
	Activity Sheet 1--Using References	
	Activity Sheet 2--Determining Resources	
	Activity Sheet 3--Preparing A Card File	
	Activity Sheet 4--Using The Dictionary	

		DATE COMPLETED
UNIT IX		
	Activity Sheet 5--Using a Word Book	
	Activity Sheet 6--Using a Reference Manual	
UNIT TEST		
OBJECTIVE	To identify and use resources and references available for office workers.	

This student has completed the indicated training under my supervision.

____

INSTRUCTOR

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

UNIT OBJECTIVE

After completion of this unit, the student will be able to identify terminology, concepts, and careers in word processing. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Define terms used in word processing.
2. List the three components of a word processing system.
3. List the five advantages of word processing.
4. Identify structures used in word processing.
5. List job titles for word processing and administrative support personnel.
6. Summarize the duties of word processing and administrative support personnel.
7. Identify the skills and attitudes required of word processing and administrative support personnel.

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

   A. Order films from sources provided in the Resources and References section.

   B. Subscribe to a magazine or magazines from the sources provided so students will have up-to-date resources to refer to when studying the following units and for information regarding office procedures and equipment.

   C. Obtain brochures and information on word processing equipment and supplies from the sources provided in the Resources and References section.

   D. Gather any resources and references to provide additional information to supplement the unit.

   E. Design a bulletin board using the brochures obtained to introduce this unit.

II. Objective Sheet

   A. Discuss the unit and specific objectives.

   B. Add any objectives necessary to fully meet the needs of the students.

III. Information and Activity Sheets

   A. Information Sheet 1--CONCEPTS OF WORD PROCESSING

      1. Discuss the information presented.

      2. Arrange for a word processing supervisor or specialist to speak to the class about concepts and careers in word processing.

      3. Show film(s) introducing students to word processing.

      4. Have students read and report on an article regarding word processing. The article may be regarding concepts, careers, equipment, or procedures in word processing.

      5. Have students complete the following activities to reinforce the information presented:

         a. Activity Sheet 1--TERMINOLOGY

         b. Activity Sheet 2--TERMINOLOGY

B. Information Sheet 2--CAREERS IN WORD PROCESSING

1. Discuss the information presented.
2. Use TM-1 to reinforce the information studied.
3. Emphasize the division of responsibilities for word processing and administrative support personnel.
4. Have students interview a person who works in a word processing office. Use Activity Sheet 4 as a guide for questions to ask and for recording the responses. Have students share the information with the rest of the class.
5. Have students complete the following activities to reinforce the information presented:
   - a. Activity Sheet 3--JOB TITLES
   - b. Activity Sheet 4--INTERVIEW
   - c. Activity Sheet 5--SKILLS AND ATTITUDES
   - d. Activity Sheet 6--JOB DUTIES
   - e. Activity Sheet 7--SELF-EVALUATION
   - f. Activity Sheet 8--CAREER OPENINGS

IV. Answers to Activity Sheets

A. Answers are provided for Activity Sheets 1, 2, 3, 5 and 6.

B. Answers to Activity Sheets 4, 7, and 8 will vary.

C. Answers should be provided for any activities added to the unit.

V. Unit Test

A. Various methods may be used for administering the test.

1. May be used as an additional activity sheet.
2. Each part may be given as the information is completed.
3. May be given upon completion of the entire unit.

B. Add test parts for any information added to the unit.

VI. Answers to Unit Test

A. Answers are provided.

B. Add answers for any test parts added.

VII. Resources and References

A. Books

1. MANAGEMENT OF WORD PROCESSING OPERATIONS
   Paula B. Cecil
   The Benjamin/Cummings Publishing Co., Inc.
   2727 Sand Hill Road
   Menlo Park, CA 94025

2. WORD PROCESSING CONCEPTS
   Mona Casady
   South-Western Publishing Company
   5101 Madison Road
   Cincinnati, OH 45227

3. INTRODUCTION TO WORD PROCESSING
   Jennie Mason
   Bobbs-Merrill Educational Publishers
   4300 W. 62nd Street
   Indianapolis, IN 46268

4. INTRODUCTION TO WORD PROCESSING
   Zane K. Quible and Margaret H. Johnson
   Winthrop Publishers, Inc.
   17 Dunster Street
   Cambridge, MA 02138

5. WORD PROCESSING: OPERATIONS, APPLICATIONS, AND ADMINISTRATION
   Walter Kleinschrod, Leonard B. Kruk, Hilda Turner
   Bobbs-Merrill Educational Publishers
   4300 W. 62nd Street
   Indianapolis, IN 46268

6. WORD PROCESSING, A COMPREHENSIVE TRAINING PROGRAM
   Bearl A. Brooks, et al
   ESP, Inc. Productions
   Jonesboro, AR 72401

7. WORD PROCESSING
   Joyce J. Caton
   Milliken Publishing Co.
   St. Louis, Missouri

B. Magazines

1. THE OFFICE
   Office Publications, Inc.
   P. O. Box 13205
   Philadelphia, PA 19101

2. MODERN OFFICE PROCEDURES
   P. O. Box 95759
   Cleveland, OH 44101

3. ADMINISTRATIVE MANAGEMENT
   P. O. Box 544
   Martinsville, NJ 08836

4. WORD PROCESSING WORLD
   Geyer-McAllister Publishers, Inc.
   51 Madison Avenue
   New York, NY 10010

5. WORDS
   IWP Association
   Maryland Road
   Willow Grove, PA 19090

6. THE SECRETARY
   National Secretaries Association
   World Headquarters
   2440 Pershing RD., Suite G-10
   Kansas City, MO 64108

C. Films

1. IBM Motion Picture Library
   Modern Talking Pictures Services
   2323 New Hyde Park Road
   New Hyde Park, NY 11040

2. Information Management Corporation
   P. O. Box 787
   Solana Beach, CA 92075

3. The Secretary
   National Secretaries Association
   World Headquarters
   2440 Pershing RD., Suite G-10
   Kansas City, MO 64108

D. Manufacturers

1. Dictaphone Corporation
   120 Old Post Road
   Rye, NY 10580

2. AM Jacquard Systems
   Dept. 777
   3340 Ocean Park Blvd.
   Santa Monica, CA 90405

3. Datapoint Corporate Communications
   MO-K05
   9725 Datapoint Drive
   San Antonio, TX 78284

4. OYX
Exxon Information Systems
101 Gordon Drive
Lionville, PA 19353

5. Lexitron Corporation
9600 DeSoto Avenue
Chatsworth, CA 91311

6. Wang Laboratories, Inc.
1 Industrial Avenue
Lowell, MA 01851

7. NBI
1695 38th Street
Boulder, CO 80301

8. IBM
General Systems Division
P. O. Box 2068
Atlanta, GA 30301

9. Radio Shack
Tandy Corporation
1300 One Tandy Center
Fort Worth, TX 76102

10. NCE Supply
915 West Liberty Drive
Wheaton, IL 60187

11. Xerox Corporation
Office Products Division
1341 W. Mockingbird Lane
Dallas, TX 75247

12. Zenith Data Systems
1909 E. Cornell
Peoria, IL 61614

13. Comptek Research, Inc.
One Technology Center
45 Oak Street
Buffalo, NY 14203

14. Lanier
P. O. Box 1555
Atlanta, GA 30301

15. Vydec, Inc.
9 Vreeland Road
Florham Park, NJ 07932

16. DEST Data Corporation
2380 Bering Drive
San Jose, CA 95131

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

INFORMATION SHEET 1--CONCEPTS OF WORD PROCESSING

I. Terms and Definitions

- A. AS--Administrative Support
- B. Administrative support--one of the two areas of specialization found in a word processing system. Nontyping activities, such as handling the mail, answering the telephone, and filing are performed by a specialized secretarial team.
- C. Administrative support center--the physical location within an office where administrative support personnel work.
- D. Cluster--a group of work stations; satellites.
- E. Correspondence center--another term for a word processing center; the location where the word processing personnel perform typing activities.
- F. Input--information or ideas in raw form; submitting work to a word processing center.
- G. Keyboarding--"typing"; entering information by operating a keyboard.
- H. Output--the final results after the input is processed, revised, and printed out; the final work produced by an automated system.
- I. Principal--a person who originates paperwork; a person who dictates "copy" for transcription into final documents.
- J. Satellite--a work group composed of word processing specialists, administrative support secretaries, or both, which may serve a department, a floor, or any group of principals in a company.
- K. System--the operations, procedures, personnel, and equipment through which a business activity is conducted.
- L. Tasks--duties performed; responsibilities; jobs; assignments; work to be done.
- M. WP--Word Processing
- N. Word processing center--the room or designated area with equipment and personnel for processing written communication.
- O. Word processing system--the combination of specific procedures, methods, equipment, and people designed to perform and improve the input, output, and distribution of written communication.
- P. Work station--a work area for one person.

II. Purpose of Word Processing

A. Word processing is a new approach to office work which cuts costs and increases office productivity; word processing has changed the social and secretarial structure of many offices by redefining the roles of the boss and the secretary.

B. The most common definition for word processing is:

> the process of taking ideas and information and changing them into a readable form through the use of people, procedures, and equipment.

C. Word processing system seeks to eliminate the inefficiencies of the secretary's standard typewriter and correction utensils and the costliness of recurrent interruptions such as answering the telephone, greeting visitors, etc.

D. A term used frequently and sometimes confused with word processing is information processing. Information processing involves the tasks related to business communications and includes the following components: data processing, word processing, records management, reprographics, micrographics, electronic mail, and forms of telecommunications. As you can see, word processing is one component of information processing.

III. Components of a Word Processing System

Word processing is more than just machines. It is a system composed of people, procedures, and equipment. Through modern management techniques, these components can:

- increase productivity
- save time
- improve the quality of typewritten communication

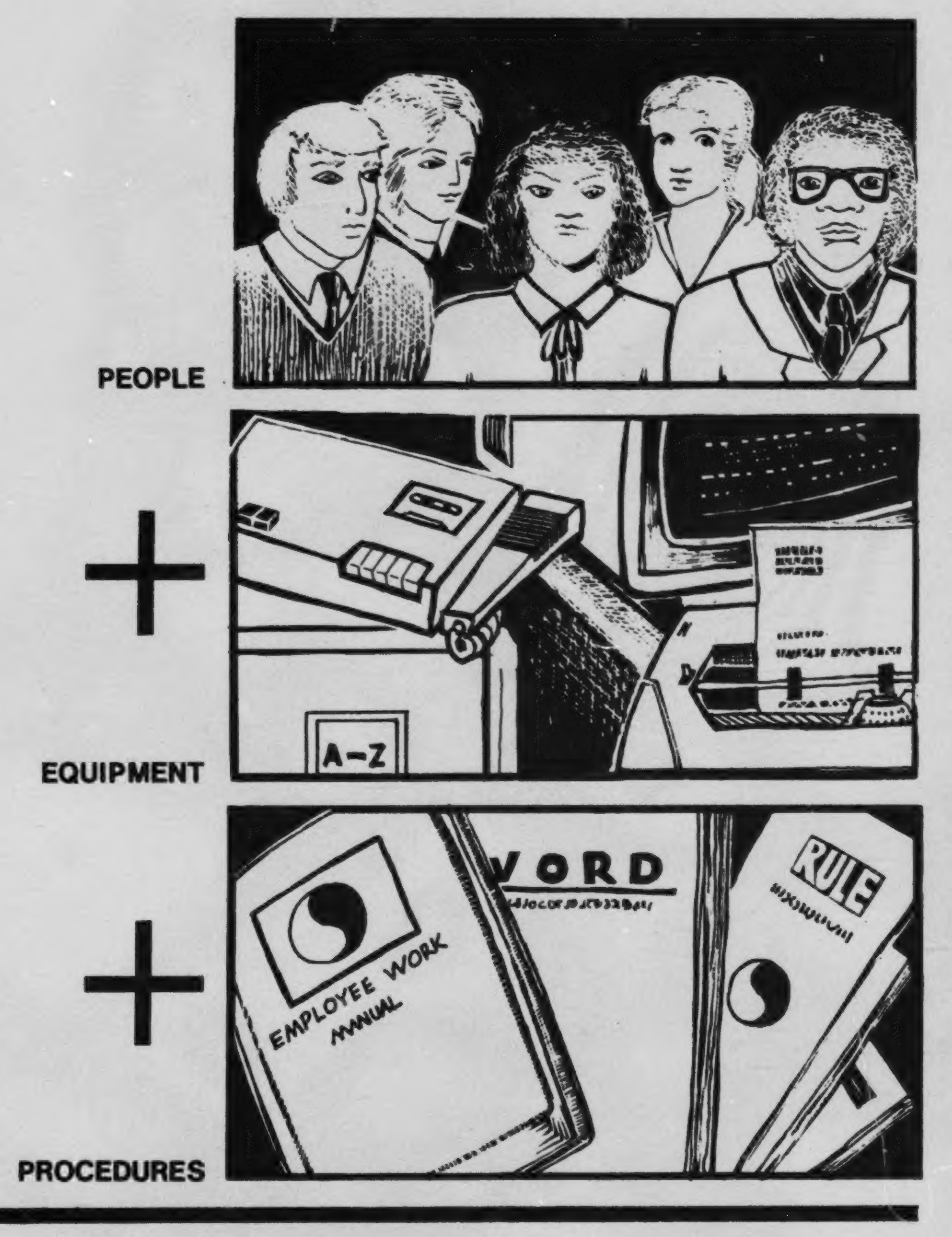
A. Personnel. Word processing changes the structure of the traditional office--the one-boss, one-secretary setup. Word processing divides secretaries into two groups in order to increase efficiency in the office.

1. Word processing specialists--responsible for keyboarding; prepare correspondence and other documents using word processing equipment.

2. Administrative support secretaries--perform all other secretarial responsibilities.

B. Equipment. Word processing evolved primarily as a result of the development of new office equipment. The equipment used in word processing includes dictation/recording equipment, automated typewriters, copiers, and communication/distribution equipment.

C. Procedures. Word processing is a system which operates according to specific procedures that are followed in the processing of information. Procedures are provided for processing information as it is created, typed, reproduced, filed, and distributed.


PEOPLE
+
EQUIPMENT
A–Z
+
PROCEDURES
EMPLOYEE WORK MANUAL
WORD
RULE

WORD PROCESSING SYSTEM

IV. Advantages and Disadvantages of Word Processing

A. Advantages

As a system designed to speed up the process of handling written communication, word processing offers several advantages over the traditional office structure:

1. Reduces costs through reduction in:
    - a. Number of typewriters needed
    - b. Number of office employees
    - c. The time and effort required to produce written correspondence
2. Increases efficiency through
    - a. Use of more effective procedures
    - b. Specialization of employees
3. Increases productivity through
    - a. Better use of employees' time
    - b. Increased output through the use of text-editing typewriters
    - c. Elimination of frequent interruptions
4. Improves turnaround time on work being completed by using a system of people, procedures, and equipment.
5. Provides a better quality of work by making editing and revising tasks easier to perform.

B. Disadvantages

1. Equipment is expensive.
2. Requires retraining of personnel.
3. Specialization of tasks can lead to boredom and dissatisfaction among employees.
4. An effective WP system can be difficult to implement.

V. Word Processing/Administrative Support Groups

In word processing/administrative support groups, the traditional job of secretary is divided into two jobs for the purpose of making better use of available human resources. By separating the nontyping tasks from the typing tasks, and by having a different person specialize in each area, office efficiency is improved.

A. Locations and Structures. The physical arrangements of the WP/AS groups depend on the following factors:

1. Type of work performed by the principals

2. Capabilities of secretaries

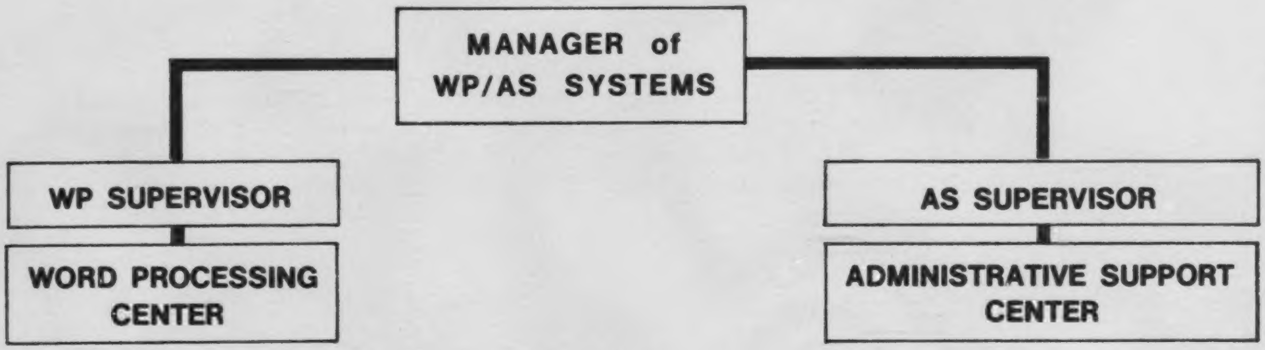
3. Type of business

4. Size of business

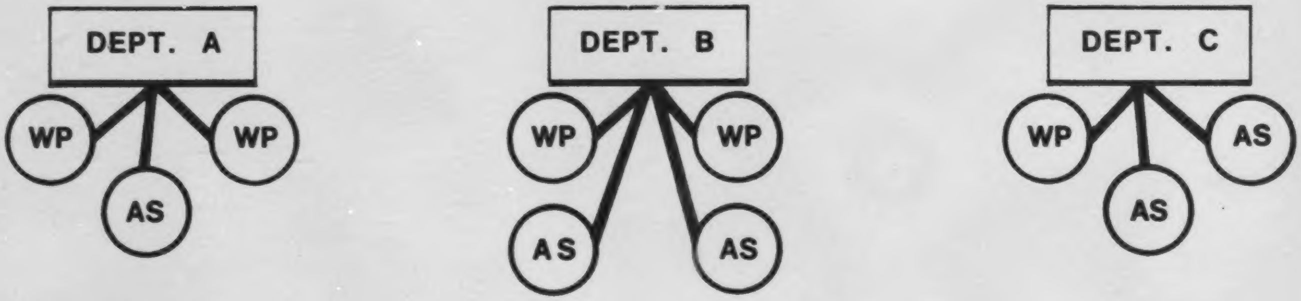
5. Availability of facilities

B. The following structures are examples of how the WP/AS groups can be arranged. An office may use an alternative to or combination of these structures, depending on the needs.

1. Centralized structure. This consists of a single word processing center and a single administrative support center. These areas have separate supervisors who report to the manager of the WP/AS systems.


MANAGER of WP/AS SYSTEMS
WP SUPERVISOR
WORD PROCESSING CENTER
AS SUPERVISOR
ADMINISTRATIVE SUPPORT CENTER

2. Decentralized structure. A number of small work groups composed of WP/AS personnel called clusters or satellites are located throughout the organization to provide services for departments, divisions, or sections of the company. This clustering of work groups enables the specialists and secretaries to work more closely with the principals.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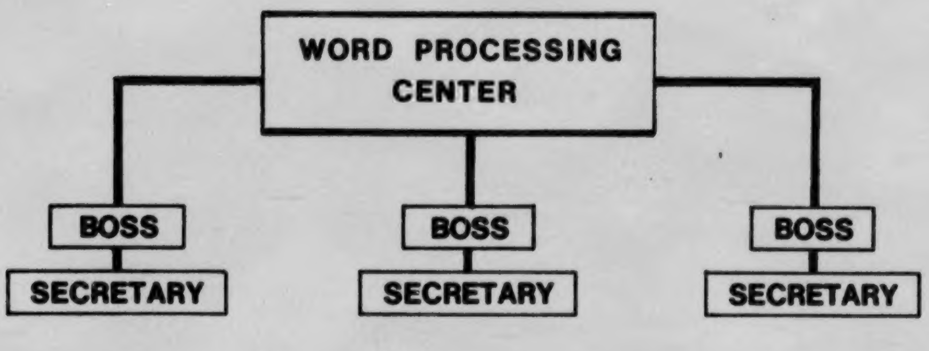
AS

3. Special-purpose structure. An office which uses this structure does not employ the administrative support concept. Traditional secretaries are used to perform nontyping jobs, as well as the light typing jobs for their principals. A centralized word processing center is used for typing long jobs, or those jobs requiring extensive editing/revising.


WORD PROCESSING CENTER
BOSS
SECRETARY
BOSS
SECRETARY
BOSS
SECRETARY

4. Integrated structure. Neither administrative support nor word processing personnel are used. Traditional secretaries perform all work and may have text-editing equipment to complete certain typing jobs.

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 1--TERMINOLOGY

DIRECTIONS: Unscramble the words below to form ten (10) terms used in word processing.

(NOTE: These terms were used in Information Sheet 1.)

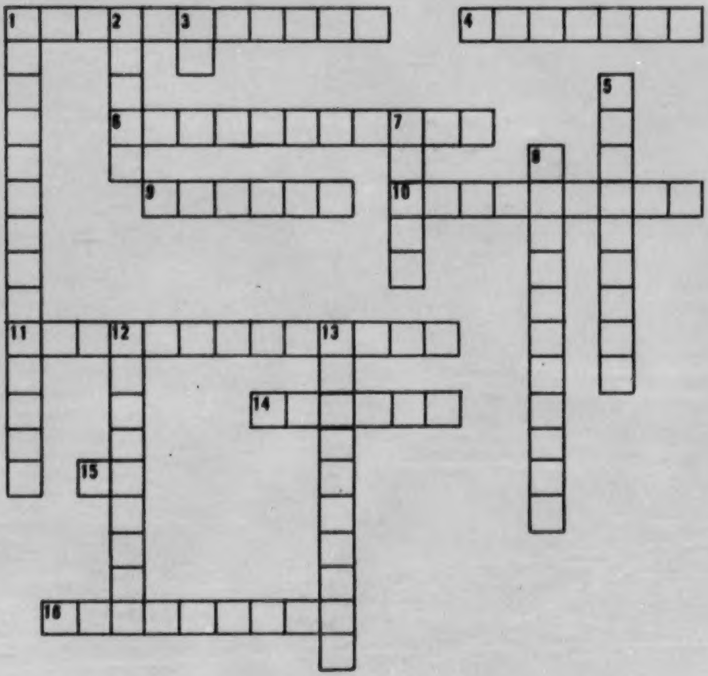
1. ATLITELES
2. SKAST
3. PINTU
4. SLUCTER
5. BODYEIKARNG
6. TUPTOU
7. YESTSM
8. RDOW CEGORSPINS
9. MATRIDINSATVAE POPSUTR
10. INRPPIALC

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 2--TERMINOLOGY

DIRECTIONS: Fill in the correct terms in the crossword puzzle.



DOWN

1. Another term for a word processing center.
2. Duties performed; responsibilities.
3. Abbreviation for administrative support.
5. A person who originates paper work.
7. Information or ideas in raw form.
8. A work area for one person.
12. Used to process the information through the word processing system. (One of the three components of a word processing system.)
13. A structure which uses neither word processing nor administrative support personnel.

ACROSS

1. A structure that consists of a single WP center and a single AS center.
4. Another word for satellite.
6. Typing.
9. The operations, procedures, personnel, and equipment through which a business activity is conducted.
10. The people who perform work in a WP system. (One of the three components of a WP system.)
11. A structure made up of a number of small work groups composed of WP/AS personnel.
14. The final results after the input is processed, revised, and printed out.
15. Abbreviation for word processing.
16. A work group composed of WP specialists, AS secretaries, or both.

CONCEPTS AND CAREERS IN WORD PROCESSING

INFORMATION SHEET 2--CAREERS IN WORD PROCESSING

I. Terms and Definitions

A. Administrative support secretary--a secretarial specialist who performs nontyping activities, such as handling the mail, answering the telephone, filing, etc.

B. Correspondence secretary--another term for a word processing specialist.

C. Photocomposition--putting material into typed form by photographing on light-sensitive paper.

D. Word originator--another word for principal.

E. Word processing specialist--a person responsible for producing all types of documents using word processing equipment; correspondence specialist.

II. Word Processing/Administrative Support Personnel

A. Office automation and word processing technology have affected the secretarial profession. From the traditional secretarial role, two specialized careers have developed--the word processing specialist and the administrative support secretary. The traditional secretarial positions are still used, but more and more offices are turning to the two specialized careers to improve the office efficiency and productivity.

B. These two specialized careers provide opportunities for personnel within a word processing system to train for positions with increasing responsibilities. The number of job levels, positions, and titles will vary from company to company. As an employee moves upward, each new position will require additional skills and knowledge for effective performance. The following paragraphs describe some of the job titles and responsibilities common to both administrative and word processing personnel. A list of desirable attitudes and skills for both groups also is provided.

C. Careers in Word Processing/Administrative Support

As a result of the specialization of skills, two separate career paths have developed which provide numerous jobs from which office personnel may choose.

1. Word Processing Personnel

(NOTE: In a small office situation, one or two people may perform some or all of the following duties.)

a. Word processing supervisor--manages the unit's personnel and operations; assists in coordinating the word processing center and its uses.

b. Word processing coordinator or scheduler--distributes the work load among the workers and maintains production records.

c. Technical specialist--helps word processing specialists determine the most efficient ways in which to produce documents; trains and assists others in using equipment; is technically competent in all word processing equipment.

d. Proofreader--proofs all final revised documents and spot-proofs daily correspondence; keeps up to date on language usage rules, and informs the supervisor of areas needing improvement.

e. Word processing specialist--produces all types of documents on word processing equipment. The titles for this position vary and may include two or more levels within the position. The following titles may be used for this job:

   (1) correspondence secretary

   (2) magnetic keyboard specialist

   (3) power typist

   (4) word processor

   (5) word processing operator

   (6) document specialist

f. Photocomposition/word processing specialist--operates both word processing and photocomposition equipment; selects appropriate formats and specifies typeface to fit the formats.

g. Messenger--transports the rough drafts and completed documents to and from the word processing center and the principals.

2. Administrative Support Personnel

a. Administrative support supervisor--manages day-to-day activities of the administrative support group; equalizes work load distribution; ensures continual availability of support to the principals.

b. Administrative support coordinator--distributes work among the administrative support secretaries; ensures that all tasks are handled efficiently.

c. Administrative support secretary--provides the principals with all basic administrative support such as filing, answering the phone, processing the mail. This position may include the following job titles:

    (1) administrative assistant
    (2) administrative support specialist
    (3) executive assistant
    (4) management support specialist or secretary

d. Receptionist--receives visitors and performs other routine receptionist duties.

D. Duties of Word Processing/Administrative Support Personnel

1. Duties of WP personnel. The main duty of WP personnel is to accurately and efficiently produce the typewritten documents for an organization. WP specialists are responsible for:

    a. Transcribing the copy dictated or written by the principals
    b. Keyboarding the copy at rough draft speed
    c. Proofreading and correcting typographical errors
    d. Editing the copy to make sure it is grammatically correct
    e. Duplicating, filing, and distributing the final copy

2. Duties of AS personnel. The administrative support job usually has three basic elements: telephone handling, mail processing, and filing. However, additional responsibilities may be completed to assist the principals for whom the AS personnel work. An AS secretary may:

    a. Assist in planning and scheduling workload
    b. Compose and dictate correspondence
    c. Gather information
    d. Research and prepare reports
    e. Requisition supplies and equipment
    f. Schedule appointments, meetings, and conferences
    g. Assist with meetings and conferences
    h. Greet visitors
    i. Prepare travel itineraries and handle travel arrangements
    j. Prepare budgets
    k. Keep records
    l. Perform some typing jobs

E. Desirable qualities for WP/AS personnel.

The following lists cover attitudes and skills that are considered important qualities for persons choosing careers in word processing.

1. Word Processing personnel

a. Attitudes

(1) is creative
(2) is cooperative
(3) plans ahead
(4) prefers to work uninterrupted
(5) likes to type
(6) is methodical
(7) works well under deadline schedules
(8) completes assigned projects
(9) is helpful
(10) is reliable and responsible
(11) is a good team worker
(12) is able to concentrate in spite of noise and distractions
(13) enjoys working with equipment

b. Skills

(1) is a fast, accurate typist
(2) is able to concentrate
(3) is mechanically inclined
(4) possesses good problem-solving logic
(5) is able to produce high-quality typed documents
(6) uses correct grammar, spelling, punctuation, capitalization, and numerical form.
(7) is familiar with all types and styles of office correspondence and reports
(8) is able to follow instructions
(9) has good listening and interpretation skills

2. Administrative Support personnel

a. Attitudes

(1) is supportive
(2) is reliable and responsible
(3) is conscientious
(4) is self-directed (has initiative)
(5) is loyal

(6) is mature
(7) is friendly
(8) is enthusiastic
(9) is able to work with interruptions
(10) is able to handle pressure
(11) enjoys people

b. Skills

(1) uses appropriate telephone techniques
(2) uses correct grammar, punctuation, spelling, capitalization, and numerical form
(3) has good dictation skills
(4) is well organized
(5) is a good proofreader
(6) has a good memory
(7) is able to set priorities

DIVISION of SECRETARIAL RESPONSIBILITIES for WORD PROCESSING

WORD PROCESSING
(Typing Duties)

TYPES CORRESPONDENCE

TYPES REPORTS

TYPES OTHER DOCUMENTS

ARRANGES MATERIAL ON A PAGE

PROOFREADS

TRANSCRIBES

FILES STORAGE MEDIA

HANDLES REVISIONS

MAINTAINS DAILY RECORDS

PERFORMS RECORDKEEPING DUTIES

COLLATES MATERIAL

ADMINISTRATIVE SUPPORT
(Non-typing Duties)

RECEIVES OFFICE CALLERS

HANDLES TELEPHONE CALLS

PROCESSES THE MAIL

MANAGES THE FILING SYSTEMS

RESEARCHES AND PREPARES MATERIALS FOR REPORTS

SCHEDULES OFFICE CALENDAR

COMPOSES AND DICTATES CORRESPONDENCE

MAINTAINS SUPPLIES

USES CALCULATING EQUIPMENT

ASSISTS EXECUTIVE WITH ADMINISTRATIVE WORK

HANDLES TRAVEL ARRANGEMENTS

SETS UP MEETINGS

COORDINATES WORK WITH WORD PROCESSING STAFF

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 3--JOB TITLES

DIRECTIONS: Read each of the descriptions for WP/AS personnel. Choose, from the list provided, the career title that is described. Write the correct title in the line to the left of each description.

WP supervisor
Messenger
AS coordinator
AS secretary
Technical specialist
AS supervisor
Proofreader
Receptionist
WP specialist
Photocomposition/WP specialist
WP coordinator

1. ____________________ Receives visitors and performs other routine receptionist duties.
2. ____________________ Proofs all final revised documents and spot-proofs daily correspondence.
3. ____________________ Manages the unit's personnel and operations; assists in coordinating the WP center.
4. ____________________ Distributes work among the AS secretaries.
5. ____________________ Produces all types of documents on WP equipment.
6. ____________________ Operates both WP and photocomposition equipment.
7. ____________________ Provides all basic administrative support to the principals.
8. ____________________ Helps WP specialists determine the most efficient ways in which to produce documents.
9. ____________________ Manages the day-to-day activities of the administrative support group.
10. ____________________ Distributes the workload among the WP specialists and maintains production records.
11. ____________________ Transports the rough drafts and completed work to and from the WP center and the principals.

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 4--INTERVIEW

DIRECTIONS: Visit a business which uses WP equipment and interview a person employed in a word processing position. Ask some of the following questions and record the answers in the spaces provided.

1. What is your career title?

2. What tasks do you perform on your job?

3. What educational training and occupational experience is required for this job?

4. What personality traits are most important in your field?

5. What skills and knowledge are required in this occupation?

6. What is the approximate starting salary of workers in your occupation?

7. What is the employment outlook for the future in this career?

8. What word processing structure is used by your company?

9. What word processing equipment do you use?

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 5--SKILLS AND ATTITUDES

DIRECTIONS: Identify the appropriate skills and attitudes required of WP/AS personnel. Place WP, AS, or WP/AS in the space provided.

_____ 1. is creative

_____ 2. uses appropriate telephone techniques

_____ 3. enjoys working with equipment

_____ 4. has initiative

_____ 5. is mechanically inclined

_____ 6. likes to type

_____ 7. is reliable and responsible

_____ 8. is friendly

_____ 9. is able to produce high-quality typed documents

_____10. is enthusiastic

_____11. is well-organized

_____12. prefers to work uninterrupted

_____13. is mature

_____14. is a good team worker

_____15. has good transcription skills

_____16. has good dictation skills

_____17. is a fast, accurate typist

_____18. is able to set priorities

_____19. is able to follow instructions

_____20. has a good memory

_____21. works well under deadline schedules

_____22. has good listening and interpretation skills

_____23. completes assigned projects

_____24. uses correct grammar, spelling, punctuation, capitalization, and numerical form

_____25. possesses good problem-solving logic

_____26. is cooperative

_____27. is able to concentrate in spite of noise and distractions

_____28. is familiar with all styles of office correspondence and reports

_____29. is able to work with interruptions

_____30. enjoys people

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 6--JOB DUTIES

DIRECTIONS: Identify the duties of WP/AS personnel by placing a "✓" in the space under the appropriate heading.

		WP Personnel	AS Personnel
1.	Assists in planning and scheduling the workload.	______	______
2.	Duplicates the final document.	______	______
3.	Researches and prepares reports.	______	______
4.	Greets visitors.	______	______
5.	Files the final copy.	______	______
6.	Proofreads the final copy.	______	______
7.	Prepares travel intineraries.	______	______
8.	Edits the final copy.	______	______
9.	Prepares budgets.	______	______
10.	Keeps records.	______	______
11.	Performs some typing jobs.	______	______
12.	Transcribes the dictated copy.	______	______
13.	Composes and dictates correspondence.	______	______
14.	Keyboards the copy at rough draft speed.	______	______
15.	Distributes the final copy.	______	______
16.	Schedules appointments, meetings.	______	______
17.	Gathers information.	______	______
18.	Corrects typing errors.	______	______
19.	Assists with meetings and conferences.	______	______
20.	Requisitions supplies and equipment.	______	______

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 7--SELF-EVALUATION

DIRECTIONS: Evaluate your own likes and dislikes, skills, abilities, and employment goals to determine how successfully you relate to word processing skills. Check the blank that best indicates your responses to the following questions. Explain how you can improve on each item with a "no" response.

		YES	NO
1.	I enjoy working with people.	______	______
2.	I am creative.	______	______
3.	I like to type.	______	______
4.	I am mechanically oriented.	______	______
5.	I enjoy working with equipment.	______	______
6.	I am able to accept challenges and responsibilities.	______	______
7.	I am able to accept changes.	______	______
8.	I am conscientious.	______	______
9.	I am flexible.	______	______
10.	I am able to make decisions.	______	______
11.	I enjoy routine work.	______	______
12.	I am able to work independently.	______	______
13.	I can be tactful, diplomatic, and courteous.	______	______
14.	I can concentrate in spite of noise and distractions.	______	______
15.	I can type accurately and rapidly straight and statistical copy.	______	______
16.	I am familiar with all types and styles of office correspondence and reports.	______	______
17.	I am able to handle pressure and work under deadlines.	______	______
18.	I am cooperative.	______	______
19.	I am a "doer".	______	______
20.	I am willing to learn about new equipment and terminology to keep up-to-date on new office trends.	______	______
21.	I am reliable and responsible.	______	______
22.	I possess good English skills.	______	______
23.	I am able to follow instructions.	______	______

CONCEPTS AND CAREERS IN WORD PROCESSING

ACTIVITY SHEET 8--CAREER OPENINGS

DIRECTIONS: Using various newspapers, have students collect and post word processing job openings on a bulletin board in the classroom. Have students review the ads and summarize the facts learned, such as typing speed required, language arts skills required, previous work experience required, and salary paid.

UNIT I

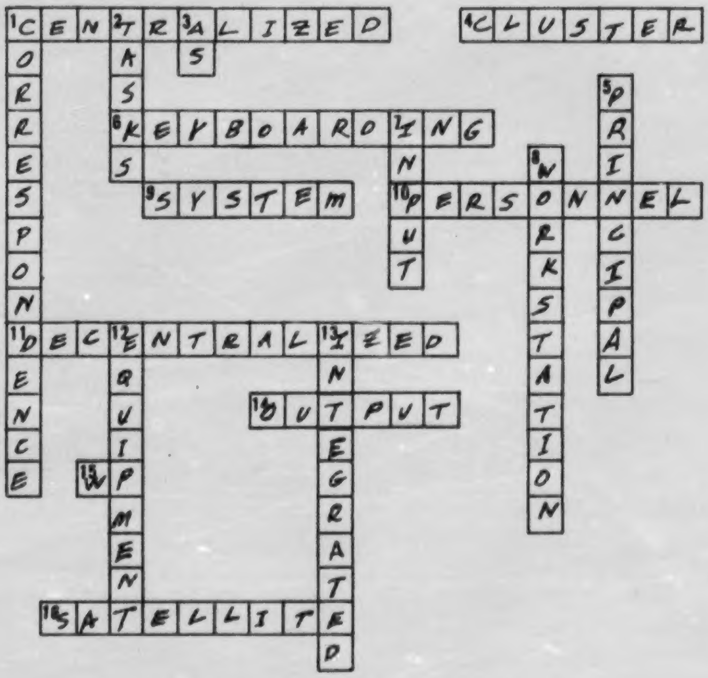
CONCEPTS AND CAREERS IN WORD PROCESSING

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

1.	Satellite	6.	Output
2.	Tasks	7.	System
3.	Input	8.	Word processing
4.	Cluster	9.	Administrative support
5.	Keyboarding	10.	Principal

Activity Sheet 2



1 CENTRALIZED
1 CORRESPONDENCE
2 TASKS
3 AS
4 CLUSTER
5 PRINCIPAL
6 KEYBOARDING
7 INPUT
8 WORKSTATION
9 SYSTEM
10 PERSONNEL
11 DECENTRALIZED
12 EQUIPMENT
13 INTEGRATED
14 OUTPUT
15 WP
16 SATELLITE

Activity Sheet 3

1. Receptionist
2. Proofreader
3. WP supervisor
4. AS coordinator
5. WP specialist
6. Photocomposition/WP specialist
7. AS secretary
8. Technical specialist
9. AS supervisor
10. WP coordinator
11. Messenger

Activity Sheet 4

Evaluated to the satisfaction of the instructor.

Activity Sheet 5

1. WP
2. AS
3. WP
4. AS
5. WP
6. WP
7. WP/AS
8. AS
9. WP
10. AS
11. AS
12. WP
13. AS
14. WP
15. WP
16. AS
17. WP
18. AS
19. WP
20. AS
21. WP
22. WP
23. WP
24. WP/AS
25. WP
26. WP
27. WP
28. WP
29. AS
30. AS

Activity Sheet 6

	WP	AS
1.		✓
2.	✓	
3.		✓
4.		✓
5.	✓	
6.	✓	
7.		✓
8.	✓	
9.		✓
10.		✓
11.		✓
12.	✓	
13.		✓
14.	✓	
15.	✓	
16.		✓
17.		✓
18.	✓	
19.		✓
20.		✓

Activity Sheet 7 and 8

Evaluated to the satisfaction of the instructor.

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

TEST--PART 1

A. Match the term associated with word processing to the correct definition by placing the letter in the appropriate space.

_____1. Administrative Support

_____2. Nontyping activities are performed by a specialized secretarial team.

_____3. The physical location within an office where nontyping activities are performed.

_____4. A group of work stations; satellites.

_____5. Another term for a word processing center.

_____6. Information or ideas in raw form.

_____7. Typing

_____8. The final results after the input is processed, revised, and printed out.

_____9. A person who originates paperwork.

____10. A work group composed of word processing specialists, administrative secretaries, or both, which may serve a department, a floor, or any group of principals in a company.

____11. The operations, procedures, personnel, and equipment through which a business activity is conducted.

____12. Duties performed.

____13. Word Processing

____14. The room or designated area with equipment and personnel for processing written communication.

____15. The combination of specific procedures, methods, equipment, and people designed to perform and improve the input, output, and distribution of written communication.

a. System

b. Word processing system

c. Output

d. Tasks

e. Work station

f. Keyboarding

g. AS

h. WP

i. Principal

j. Word processing center

k. Administrative support center

l. Correspondence center

m. Satellite

n. Administrative support

o. Input

p. Cluster

B. Define word processing.

C. List the three (3) components of a word processing system.

1.
2.
3.

D. State the five advantages of word processing.

1.

2.

3.

4.

5.

E. Match the term associated with structures used in word processing to the correct definition by placing the letter in the appropriate space.

_____1. Consists of a single word processing center and a single administrative support center.

_____2. Has a word processing center but does not use administrative support personnel.

_____3. Uses satellites located throughout the company.

_____4. Uses traditional secretaries who may use text-editing equipment to perform some typing jobs.

a. Decentralized structure

b. Special-purpose structure

c. Centralized structure

d. Integrated structure

UNIT I

CONCEPTS AND CAREERS IN WORD PROCESSING

TEST--PART 2

A. Define the following:

1. Administrative support secretary

2. Correspondence secretary

3. Photocomposition

4. Word originator

5. Word processing specialist

B. List four job titles for:

1. Word processing personnel

2. Administrative support personnel

C. Summarize the main duties of:

1. Word processing personnel

2. Administrative support personnel

D. Identify seven skills and attitudes for

1. Word processing personnel

2. Administrative support personnel

UNIT I TEST

ANSWERS TO UNIT TEST

PART 1

A.

1. g
2. n
3. k
4. p
5. l
6. o
7. f
8. c
9. i
10. m
11. a
12. d
13. h
14. j
15. b

B.

The process of taking ideas and information and changing them into a readable form through the use of people, procedures, and equipment.

C.

People, equipment and procedures.

D.

1. Reduces costs
2. Increases efficiency
3. Increases productivity
4. Improves turnaround time on work being completed
5. Provides a better quality of work

E.

1. c
2. b
3. a
4. d

A. 1. Administrative support secretary--a secretarial specialist who performs nontyping activities.

2. Correspondence secretary--another term for a word processing specialist.

3. Photocomposition--putting material into typed form by photographing on light-sensitive paper.

4. Word originator--another word for principal.

5. Word processing specialist--a person responsible for producing all types of documents using word processing equipment.

B. Four of the following

1. WP supervisor, WP coordinator, technical specialist, proofreader, word processing specialist, photocomposition/ WP specialist, messenger

2. AS supervisor, AS coordinator, administrative support secretary, receptionist

C. (Should include some of the following duties in their list)

1. To accurately and efficiently produce the typewritten documents for an organization. Also transcribe, keyboard, proofread, edit, duplicate, file, and distribute documents.

2. To handle the telephone, process the mail, and file. Also plan and schedule work; gather information; compose and dictate correspondence; prepare reports; requisition supplies; schedule appointments; greet visitors; prepare travel itineraries and handle travel arrangements; prepare budgets; keep records; and perform some typing jobs.

D. Any seven of the following

1. creative; cooperative; likes to type; completes assigned projects; team worker; reliable and responsible; plans ahead; prefers to work uninterrupted; methodical; helpful; fast, accurate typist; able to concentrate; mechanically inclined; possesses good problem-solving logic; able to produce high-quality typed documents; uses correct grammar; familiar with all types and styles of correspondence and reports; able to follow instructions; has good listening and interpretation skills

2. supportive; reliable and responsible; conscientious; self-directed; loyal; mature; friendly; enthusiastic; ability to work with interruptions; able to handle pressure; enjoys people; uses appropriate telephone techniques; uses correct grammar; has good dictation skills; well organized; good proofreader; has a good memory; able to set priorities.

UNIT II

WORD PROCESSING EQUIPMENT

UNIT OBJECTIVE

After completion of this unit, the student will be able to identify equipment used in word processing systems. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Define terms associated with word processing equipment.
2. Identify four types of discrete media equipment.
3. List four types of discrete media.
4. Describe endless loop media equipment.
5. Identify three types of stand-alone systems.
6. List the components of a display and mechanical text-editor.
7. Identify three types of interactive typing systems.
8. List the two types of equipment that can be interfaced with word processing equipment.
9. List the storage media used with output equipment.
10. Identify the printing mechanisms used to print out the information which has been stored.
11. Identify the four types of reproduction equipment.
12. Identify the methods used for distribution of documents in a word processing system.

UNIT II

WORD PROCESSING EQUIPMENT

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

   A. Order films from sources provided in order to show appropriate film to introduce equipment used in word processing.

   B. Obtain brochures and information on word processing equipment and supplies from the list of manufacturers provided in Unit I.

   C. Gather any additional resources and references to provide additional information to supplement the unit.

   D. Design a bulletin board to introduce the unit using the brochures and pictures obtained from the manufacturers. Categorize the equipment and supplies according to use so students will be able to identify the word processing equipment more easily.

   E. Arrange for a word processing vendor to visit the class to tell about various word processing equipment available. See if the vendor will bring some equipment for demonstration to the class.

   F. Arrange for a field trip to a company that has a word processing center or uses word processing equipment so students will have an opportunity to see the equipment in use.

II. Objective Sheet

   A. Discuss the unit and specific objectives.

   B. Add objectives, if necessary, to fully meet the needs of the students.

III. Information and Activity Sheets

   A. Information Sheet 1--INPUT EQUIPMENT

      1. Discuss the information presented.

      2. Have students complete Activity Sheet 1--TERMINOLOGY to reinforce the information studied.

      3. Have students read and report on an article regarding word processing equipment. (Use the magazines subscribed to in Unit I.)

B. Information Sheet 2--OUTPUT EQUIPMENT

    1. Discuss the information presented.

    2. Provide examples of the various types of equipment discussed.

    3. Have students complete the following activity sheets:

        a. Activity Sheet 2--TERMINOLOGY

        b. Activity Sheet 3--CATEGORIES OF EQUIPMENT

        c. Activity Sheet 4--COMPONENTS

C. Information Sheet 3--REPRODUCTION AND DISTRIBUTION EQUIPMENT

    1. Discuss the information presented.

    2. Provide examples of the equipment discussed.

    3. Have students complete Activity Sheet 5--TERMINOLOGY.

IV. Answers to Activity Sheets

A. Answers are provided.

B. Provide answers for any activities added.

V. Unit Test

A. Various approaches may be used in testing.

    1. May be used as an additional activity.

    2. Each part may be given as the information is completed.

    3. May be given upon completion of the entire unit.

B. Add test parts for any information added to the unit.

VI. Answers to Unit Test

A. Answers are provided.

B. Provide answers for any questions added.

UNIT II

WORD PROCESSING EQUIPMENT

INFORMATION SHEET 1--INPUT EQUIPMENT

As you have already learned, equipment is one of the three components of a word processing system. The following information explains the various types of equipment available and how each is used in a word processing system. To assist you in understanding the information presented, the equipment is categorized according to the four areas of use:

Input Equipment
Output Equipment
Reproduction Equipment
Distribution Equipment

I. Terms and Definitions

A. Access time--the time required to transfer information from an input unit to the location in memory where it will be stored.

B. DE--dictation equipment.

C. Dedicated recorder--a recorder used for one type of dictation or by a specific individual(s). (For example, the recorder may be used for dictation of correspondence or for dictation of legal documents.)

D. Discrete media--recording media which can be removed and stored, mailed, or placed in other equipment.

E. Endless loop medium--a sealed, continuous loop of magnetic tape used for recording information.

F. Input unit--a device into which information can be entered; a dictation recorder.

G. Magnetic media--belts, cards, disks, tapes, or cassettes coated with magnetic material, for use with word processing equipment; dictation or keystrokes are recorded and stored on the media.

H. Magnetic medium--the singular form of the word magnetic media.

I. Optical Character Recognition Reader (OCR)--a reader used to scan and recognize printed characters and change them into digital signals for input onto a magnetic medium.

J. Random access--the ability to find information quickly on magnetic media, regardless of where the information is located on the media.

K. Recorder--the unit in a dictation system which records dictation on a magnetic medium.

L. Recording media--paper or magnetic supplies used to record and store information.

II. Input Equipment

Use of dictation/recording equipment is one of the methods through which material to be typed is put into the system. The dictation/recording equipment is used by the principals to dictate material onto a recording medium. The material is later transcribed by a word processing specialist using a text-editing typewriter. Dictation equipment is categorized by the type of recording media used as either discrete or endless loop media.

A. Discrete Media Equipment. Equipment which uses discrete media for recording information. The recording unit has a removable recording medium, such as a magnetic belt, tape cassette, cartridge, or disk, which can be removed from the recording unit and placed in a transcription unit or filed for later use.

1. Types of discrete media equipment

a. Portable units are self-contained, hand-held units which enable the principal to dictate outside the office at any time. When the material is ready to be transcribed, the recording medium is removed and placed in the transcription unit (i.e., a battery-operated cassette recorder).

b. Desk-top units are located in the offices of the principals and are available in three styles:

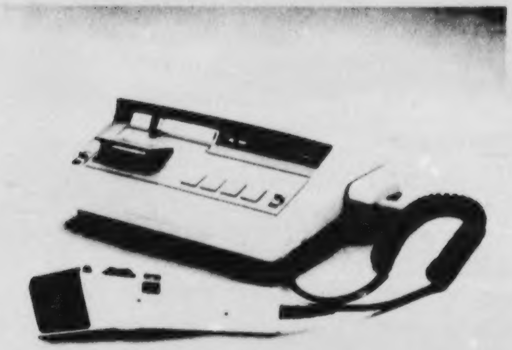


PHOTO COURTESY OF LANIER BUSINESS PRODUCTS INC.

(1) a unit to record dictation only.

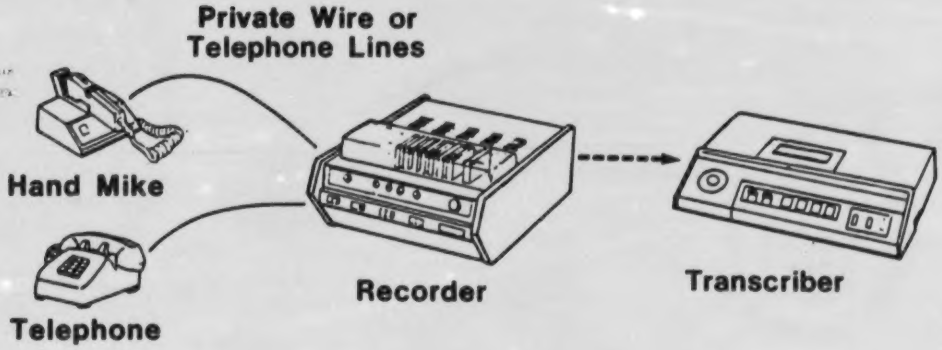
(2) a unit to transcribe dictation.

(3) a combination unit which can be used both for recording and for transcribing.

c. Centralized recording system. In this system, the principal uses a dictation device which is connected to a recording unit in the word processing center. When the dictation is completed, the recording medium is removed and placed in a transcription unit for transcribing by the word processing specialist in the center. There are two types of centralized systems:

(1) Private wire system--the dication device is connected to the recording unit by private wire. A switch on the dictation unit is flipped to activate the recording unit in the word processing center.

(2) Telephone line system--the telephone in the principal's office is connected to the recording unit in the word processing center. Numbers are dialed or depressed to activate and control the recording unit.



d. Transcription units are required for each word processing station in a discrete media system. The recording medium is placed in the transcription unit to play back the material for typing. Each unit consists of a listening device, foot pedal control, and the playback unit which holds the recording medium.

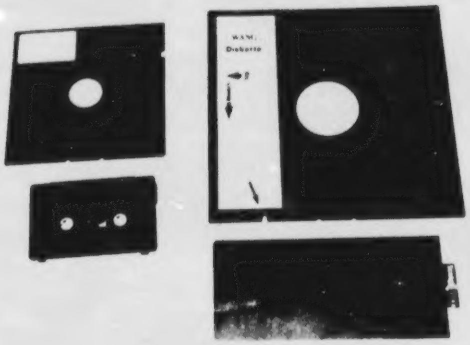
PHOTO COURTESY OF LANIER BUSINESS PRODUCTS INC

2. Types of discrete media

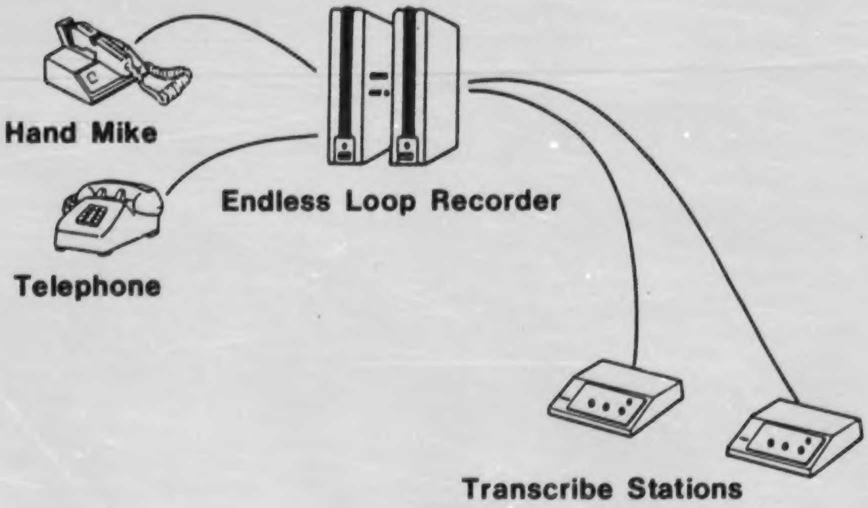
   a. Magnetic cards

   b. Magnetic floppy disks

   c. Magnetic tape cassettes



B. Endless Loop Media Equipment. This dictation equipment uses an endless loop of magnetic tape which is permanently enclosed in a tank to eliminate handling of the recording medium. Endless loop media equipment is a centralized system with the recording and transcription units encased in the tank which is located in the word processing center. The dictation device is located in the principal's office and is connected to the recording/transcription tank by either private wire or telephone line system.

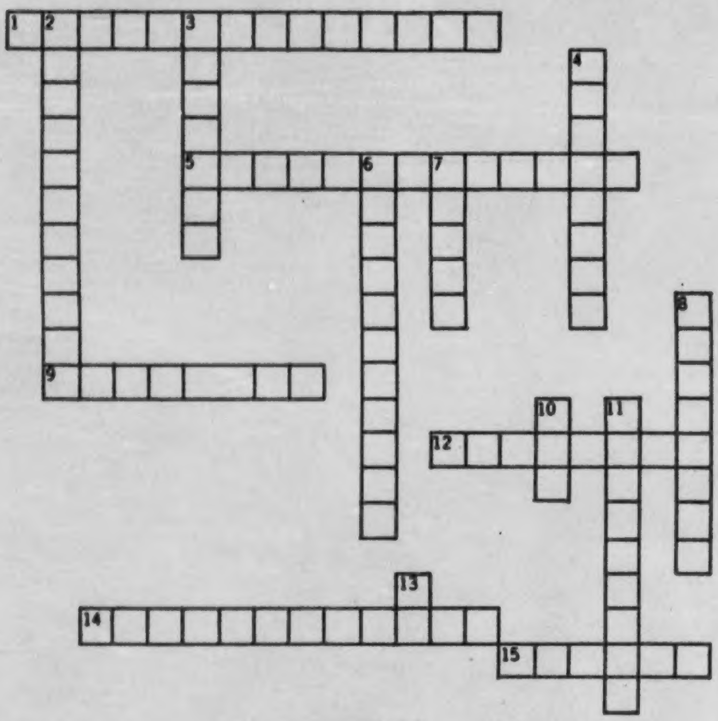

Hand Mike
Endless Loop Recorder
Telephone
Transcribe Stations

UNIT II

WORD PROCESSING EQUIPMENT

ACTIVITY SHEET 1--TERMINOLOGY

DIRECTIONS: Fill in the correct terms associated with input equipment in the crossword puzzle.



ACROSS

1. Paper or magnetic supplies used to record and store information. (Two words.)
5. Units used to play back material for typing. Consists of a listening device, foot pedal control, and playback unit.
9. Self-contained, hand-held units used for dictation.
12. Recording media which can be removed and stored, mailed, or placed in other equipment.
14. The ability to find information quickly on magnetic media. (Two words.)
15. The time it takes to transfer information from an input unit to the location in memory where it will be stored.

DOWN

2. A continuous loop of magnetic tape used for recording information. (Two words.)
3. Unit located in the principal's office which is used for dictation. (Two words.)
4. The unit in a dictation system which records dictation on a magnetic medium.
6. Dictation system which has the dictation device connected to a recording unit by private wire or telephone lines.
7. A unit into which information can be entered.
8. Media, such as belts, cards, disks, tapes or cassettes coated with a magnetic material.
10. Abbreviation for Optical Character Recognition Reader.
11. A recorder used for one type of dictation or by a specific individual(s).
13. Abbreviation for dictation equipment.

3

UNIT II

WORD PROCESSING EQUIPMENT

INFORMATION SHEET 2--OUTPUT EQUIPMENT

I. Terms and Definitions

A. Cathode Ray Tube Screen (CRT)--a component of the display text-editor. (As material is keyboarded, it appears on the CRT screen.)

B. Editing--correcting and revising a copy before it is put into final form and printed.

C. Facsimile--a device which transmits a picture of the hard copy over existing telephone lines.

D. Hard copy--written, typed, or printed copy; a document.

E. Hardware--the electrical, electronic, magnetic, and mechanical devices used in a system.

F. Interface--linking two machines or systems together.

G. Line printer--a device which prints a line at a time.

H. Logic--the instructions which are programmed into a system to make it perform all designated funtions. For example, automatic underlining or centering.

I. Mode--the operating conditions of a unit. For example, the ability to record or playback.

J. Output--the final results after input material is processed, revised, and printed out.

K. Playback--the printing out of information which has been recorded.

L. Repetitive typing--documents, such as form letters, which are played back over and over.

M. Revision--editing and making typewritten corrections.

N. Shared-logic--several text-editors using the memory and processing powers of a computer.

O. Soft copy--information stored on a magnetic medium or on a CRT screen.

P. Software--programs which instruct or control the operations of a computer.

Q. Terminal--any device (i.e. communicating text-editor) capable of sending or receiving information over a communications channel.

R. Transcribe--to produce a typed document from recorded dictation.

S. Transmit--to send from one person or place to another.

T. Turnaround time--the actual amount of time that elapses from the point when a document is inputted to that time when it is produced in final, output form.

U. Work station--a work area for one person.

II. Output Equipment

Output equipment is used to process material into a final typewritten form by using either a typewriting device, a printing device, or a machine that is interfaced with other word processing equipment. The following information covers devices used to keyboard, store, and print information.

A. Automated Typing Equipment. There are two groups of automated typing systems used to keyboard information:

1. Stand-alone systems are basically self-contained, which means that they are not connected to other equipment in the word processing system. There are three types of stand-alone equipment:

   a. Automatic repetitive typewriters are those which can play back keyboarded material from a storage medium. They are primarily used for repetitive work, such as form letters.

b. Mechancial (non-visual) Text-Editors have features which enable the typewriter to perform some typing tasks automatically and a magnetic medium on which to record the material being keyboarded. Limited revisions of short documents can be made by this machine. The three components of a mechanical text-editor are:

(1) Keyboard/printing unit, which is used to keyboard and play back the material. As the material is keyboarded, a copy is prepared on paper and the document is also stored on a magnetic medium. After the copy is proofread and corrected, copies are prepared. The printing device converts the information on the magnetic medium into printed words.

(2) Recording/storage device, which records the material as it is being keyboarded. Most text-editors use a magnetic medium to store information, but some have an internal memory unit on which to store information.

(3) Logic/intelligence device, which is the "brain" of the text-editor. This device directs the functions and operations of the typewriter. It holds the working memory of the machine and can be either a part of the keyboard unit, or a separate console unit which is connected to the keyboard.

PHOTO COURTESY OF XEROX CORP.

c. Display Text-Editors are similar to the mechanical text-editors except that they have greater capabilities. For example, the display text-editors have greater revision capabilities. There are four components of a display text-editor:

(1) Visual display terminal, which is composed of the electronic keyboard and the visual screen (CRT). The screen allows the user to see the copy as it is being keyboarded. Corrections and/or revisions are made on the screen by using a cursor (pointer).

(2) Printing device, which is separate from the keyboard unit; enables the user to begin keyboarding a second project while the first is being printed.

(3) Recording and storage device, which records and stores the material as it is keyboarded.

(4) Logic/intelligence device or unit, which is the "brain" of the machine; directs the functions and operations of the typewriter.

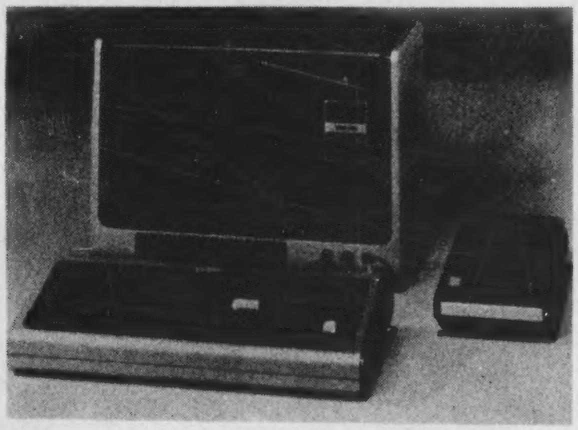


PHOTO COURTESY OF RADIO SHACK

2. Interactive Typing Systems are text-editors which can communicate or interact with computers or other word processing terminals. They communicate by sending or receiving material over telephone or private wire lines.

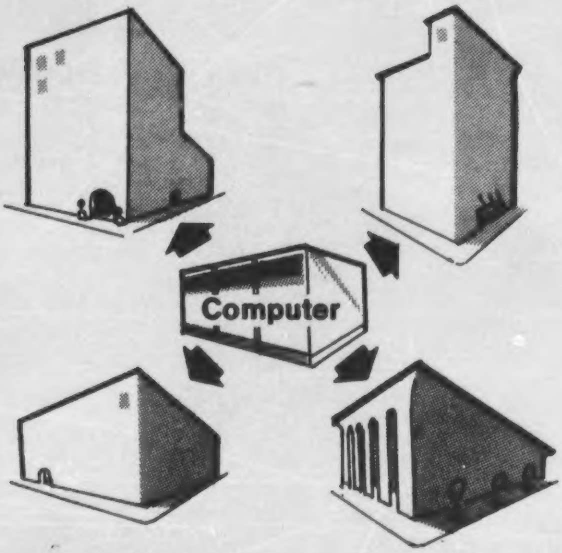
PHOTO COURTESY OF XEROX CORP.

a. Communicating Stand-Alone Text-Editors are similar to the text-editors already discussed, except these text editors can send or receive information by telephone or private wire lines connected to another communicating text-editor or computer.

b. Shared Logic Text-Editors provide for several text-editor keyboard units to share the logic/intelligence and recording/storage components of a computer. These do not have a logic/intelligence unit or a recording storage medium. These computers may be minicomputers connected with a central processing unit (CPU), a large computer which already performs data processing work for the company.

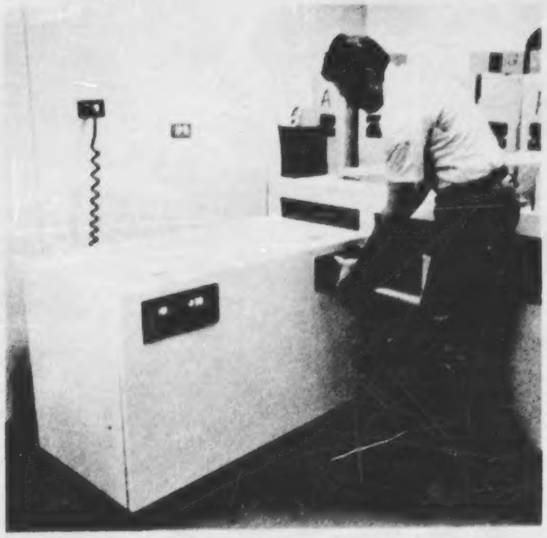
PHOTO COURTESY OF COMPTEK RESEARCH INC.

c. Time-Sharing Text-Editors are linked to a computer located at a service bureau which owns the computer. Users of the computer pay a fee for the computer time used. The users have text-editors which serve as terminals to input and send material to the computer. The computer stores and processes the material. The service bureau provides the users with printed copies.



B. Interfaced Equipment. As you have already learned, word processing equipment may include interfaced components, such as a computer interfaced with text-editing typewriters. Word processing equipment is now being expanded to interface with other equipment, such as:

1. Photocomposition equipment, which reproduces a copy by photographing on light-sensitive paper. The copy produced holds up to 40 percent more material than a typewritten copy and provides a high-quality copy. Text-editing typewriters are used to keyboard the information onto magnetic medium which is compatible with the typesetting equipment. The photocomposition unit processes the information stored on the magnetic medium into a final, printed copy.

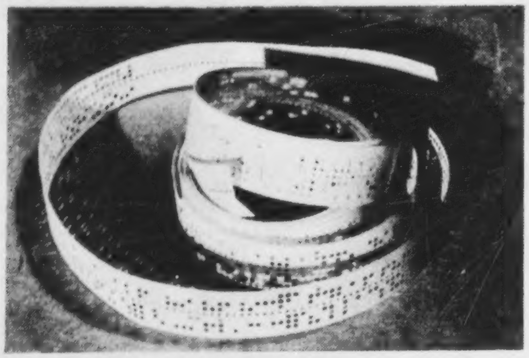


2. Optical Character Recognition Reader (OCR), which allows the reader to scan typewritten pages and record information onto a magnetic medium for playback on a printer. This reader eliminates re-keyboarding the typed pages on a text-editor. The OCR is used for both input and output of material.

PHOTO COURTESY OF COMPTEK RESEARCH INC

C. Storage Media. An important part of the text-editing typewriter is the recording medium on which the keyboarded material is stored either for immediate playback or for later use. The following media are available for use in recording/storing information:

1. Perforated paper tape--a strip of paper. As material is keyboarded, holes are punched into the tape to represent keystrokes.

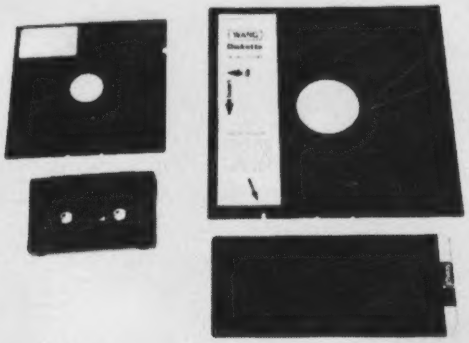


2. Magnetic tape--a strip of plastic coated with a chemical containing magnetized particles; is enclosed in either a cassette or cartridge. These can be erased and used again.

3. Magnetic floppy disks--a magnetic media, which looks like a phonograph record, made of a flexible plastic. These disks can be erased and used again.

    a. Flippy disks--a floppy disk which can be recorded on both sides.

    b. Mini disks--a small floppy disk.

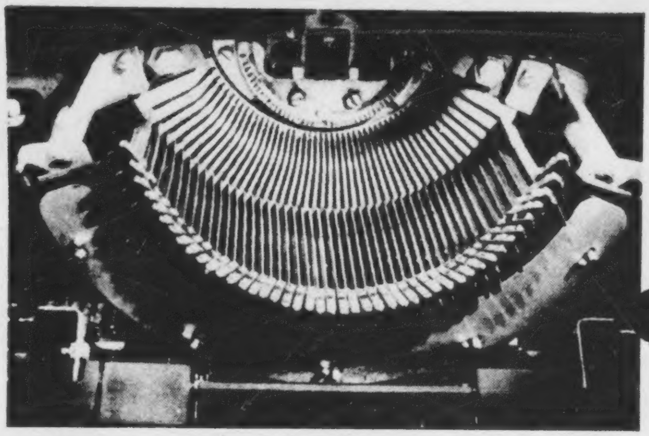


4. Core memory--text-editors that are interfaced with a computer use the core memory of the computer to store information. Some typewriters have a core memory as an internal storage medium.

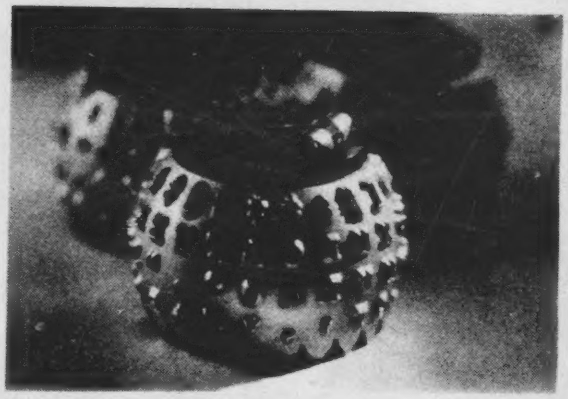
5. Built-in storage devices--some typewriters, such as the memory typewriter, have built-in storage devices which cannot be removed from the typewriter.

D. Printing mechanisms. A variety of printing mechanisms are used to print out the information which has been stored. Some examples:

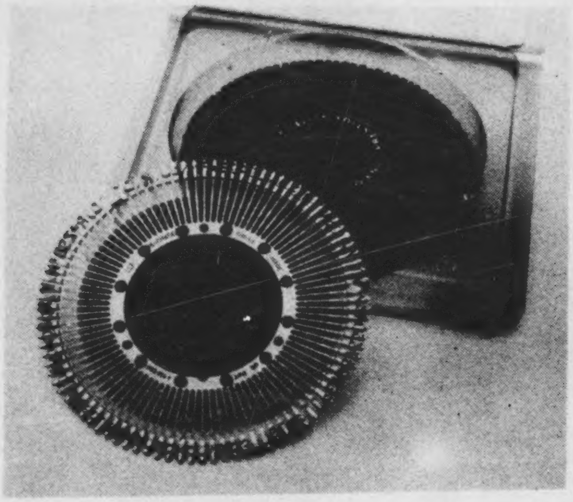
1. Typebars--the oldest of the printing mechanisms, and the slowest.



2. Elements--type sizes and styles may be changed easily; prints faster than the typebar.



3. Printwheels--resemble a daisy flower with a different letter on each spoke. Printwheels are interchangeable and type at a faster rate than either typebars or elements.



4. Ink-jet printers--these printers do not strike against the paper on the platen. Instead, ink is sprayed onto the paper, creating the character images; this is one of the fastest printing mechanisms.

5. Laser pictures--the information is keyboarded in and processed into a readable format through the use of a laser (light) beam, which writes directly on a type of film. This results in a very rapid printing speed.

6. Fiber optic pictures--light is carried through microscopic glass rods to generate the image. This is one of the newest and fastest means of printing used.

UNIT II

WORD PROCESSING EQUIPMENT

ACTIVITY SHEET 2--TERMINOLOGY

DIRECTIONS: Find the 25 terms that relate to equipment used in output in the Word-Find Puzzle below:

T	O	N	N	A	G	B	S	T	F	A	C	S	I	M	I	L	E	F	R
I	U	A	M	T	E	R	M	I	N	A	L	Q	P	S	R	L	I	S	E
M	L	R	N	E	W	S	H	A	R	E	D	L	O	G	I	C	W	A	P
E	C	X	N	Z	E	L	A	I	N	E	P	V	K	I	Y	D	O	S	E
S	O	H	I	A	D	E	B	E	D	I	T	I	N	G	B	V	R	S	T
H	J	V	A	S	R	L	D	S	H	A	R	T	E	X	T	X	D	L	I
A	H	A	R	D	C	O	P	Y	V	I	C	R	T	O	U	T	P	U	T
R	J	I	M	B	M	G	U	C	X	E	A	A	M	B	P	B	R	N	I
I	R	N	E	A	L	I	P	N	K	W	A	N	K	A	R	E	O	N	V
N	N	X	J	A	N	C	S	B	D	O	T	S	K	A	Y	I	C	P	E
G	E	T	M	N	O	P	Q	R	S	U	E	M	A	T	T	A	E	A	R
N	A	T	E	L	E	E	A	L	A	N	D	I	I	A	E	R	S	C	O
S	A	N	V	R	E	H	A	S	I	L	I	T	T	Y	P	O	S	V	S
N	A	Y	R	D	F	Y	A	R	B	E	S	S	P	E	N	A	O	D	O
P	E	A	R	P	L	A	Y	B	A	C	K	O	L	E	N	A	R	J	F
E	C	I	N	J	A	D	C	E	L	R	C	L	E	D	O	N	E	I	T
P	R	I	N	T	E	R	S	E	O	T	V	E	S	C	X	Z	P	N	W
R	I	C	H	A	R	D	B	W	F	R	E	V	I	S	I	O	N	N	A
P	A	M	B	O	P	S	A	O	E	B	L	B	V	T	I	U	A	F	R
A	E	I	T	R	A	N	S	C	R	I	B	E	O	U	Z	L	I	N	E

Timesharing
Transmit
Word Processor
Interface
Hard Copy
Hardware
Work Station
Transcribe
Terminal
Playback
Mode
Shared Logic
Soft Copy
Facsimile
Revision
Disk
Text
Output
Line
Logic
Repetitive
Turnaround
Printer
Editing
Software

WORD PROCESSING EQUIPMENT

ACTIVITY SHEET 3--EQUIPMENT CATEGORIES

DIRECTIONS: From the list of words below, write each term under the appropriate category with which it is normally associated.

- Typebars
- Core memory
- Perforated tape
- Magnetic tape
- Mechanical text-editor
- Time-sharing text editor
- Shared-logic text-editors
- Automatic repetitive typewriters
- Magnetic floppy disks
- Communicating text-editor
- Photocomposition equipment
- Display text-editor
- Fiber optic
- OCR
- Daisy wheel
- Built-in storage device
- Laser
- Ink jet printer

Stand-Alone Systems

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Interactive Systems

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Interfaced Equipment

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Storage Media

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Printing Mechanisms

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____

UNIT II

WORD PROCESSING EQUIPMENT

ACTIVITY SHEET 4--EQUIPMENT COMPONENTS

DIRECTIONS: Identify the components for the following equipment.

Mechanical Text-Editor	Display Text-Editor
________________________	________________________
________________________	________________________
________________________	________________________
________________________	________________________
________________________	________________________

UNIT II

WORD PROCESSING EQUIPMENT

INFORMATION SHEET 3--REPRODUCTION AND DISTRIBUTION

I. Terms and Definitions

A. Electronic mail--communications transmitted in digital code between locations, and reproduced on paper at the destination.

B. Dumb copier--a copier without a microcomputer; reproduces copy from a hard copy.

C. Intelligent copier--a copier with a "brain"; contains a microcomputer; creates images electronically; capable of creating originals from other than hard copy; can be interfaced with word processing equipment.

D. Telecommunications--the transmission of information between locations by means of electrical or electromagnetic systems, such as telephone or telegraph.

II. Reproduction Equipment

Reprographics, the process of copying, is an important part of the word processing system because principals usually need a file copy for follow-up, and many times they need copies to send to other people. Reproduction of typewritten material can be done in several ways:

A. Carbon copies. This is the least expensive method when the number of copies ranges from one to five. Copies can be quickly and easily made, but the quality is poor and productivity is reduced when errors must be corrected.

B. Automatic typewriter. Copies are made by repetitive playout of originals. This is expensive when preparing a large number of copies.

C. Office copiers. There are two types of copying devices:

1. Intelligent copiers. Contains a microcomputer which directs the functions and operations of the copier. Examples of intelligent copiers are Savin 840, Xerox 5700.

2. Dumb copiers. Make copies from hard copy only; do not contain a microcomputer.

D. Duplicators. These are used when high volume and superior quality copies are needed. Duplicators can reproduce copies in color and at a faster speed than other methods.

III. Distribution Equipment

Once a document has been processed, it is ready to be distributed. Documents are usually distributed within a company by interdepartmental mail or by messenger. The U.S. Postal Service is normally used to send and receive documents outside the company. However, companies are looking for an alternative to this slow distribution process and are finding that telecommunication--"electronic" mail--is the answer.

Telecommunication is the process of moving information from one point to another by electronic transmission of impulses by telegraph, radio, cable, telephone, or television. The following are forms of "electronic" mail:

A. Data Communications. Information stored in a computer is transmitted from one location to another, from one computer to another, without being printed on paper. This information is communicated over telephone lines within an organization, to other organizations, and throughout the world.

B. Communicating Word Processors. By using compatible word processing terminals at each location, messages or documents can be sent or received directly. The information is keyboarded and sent by electronic impulses to other locations, where it is printed. Word processing terminals can also be interfaced with copier or photocomposition equipment for transmission and printing of copies at another location.

C. Telex or TWX. These are teletypewriters which can send information to or receive information from similar terminals through telephone or telegraph line connections.

D. Facsimile. The "fax" is used to send or receive information in picture form. The fax scans a document, converting the image into a series of signals which are transmitted over telephone lines. The receiving terminal converts the signals to an image on paper.

PHOTO COURTESY OF XEROX CORP

UNIT II

WORD PROCESSING EQUIPMENT

ACTIVITY SHEET 5--TERMINOLOGY

DIRECTIONS: Match each of the WP terms to its correct definition by writing the appropriate letter in the blanks provided.

a. carbon copies
b. dumb copier
c. duplicators
d. facsimile
e. telex
f. electronic mail
g. communicating word processor
h. intelligent copier
i. telecommunication
j. data communications
k. automatic typewriter

_____ 1. Copier which creates images electronically.

_____ 2. A WP terminal that can send or receive information.

_____ 3. A device used to send or receive information in picture form.

_____ 4. Machine which makes copies by repetitive playout of originals.

_____ 5. Least expensive method used when the number of copies ranges from one to five.

_____ 6. The transmission of information by means of electromagnetic or electrical systems.

_____ 7. A copier without a microcomputer.

_____ 8. System which uses teletypewriters to send and receive information.

_____ 9. Information sent from one computer to another.

_____10. Equipment used to reproduce a high volume of copies.

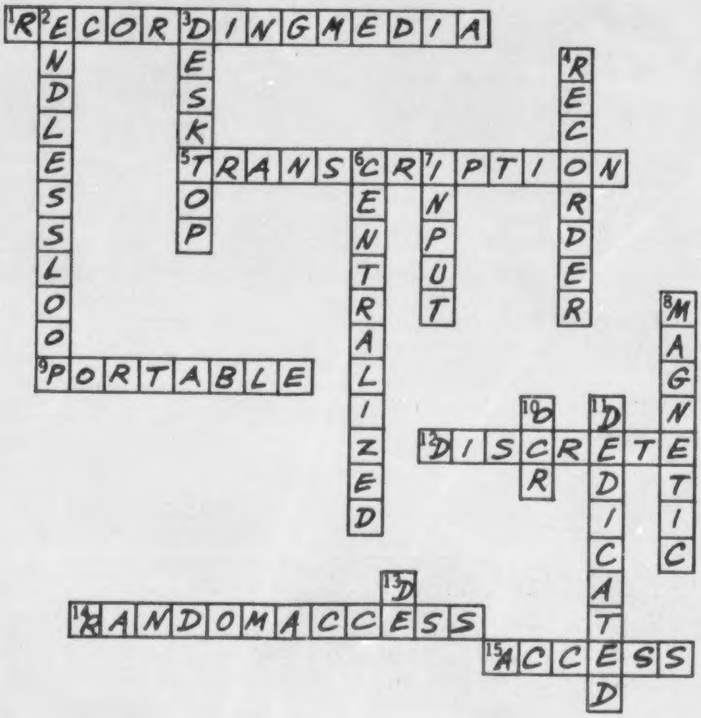
_____11. Communication transmitted in digital code.

UNIT II

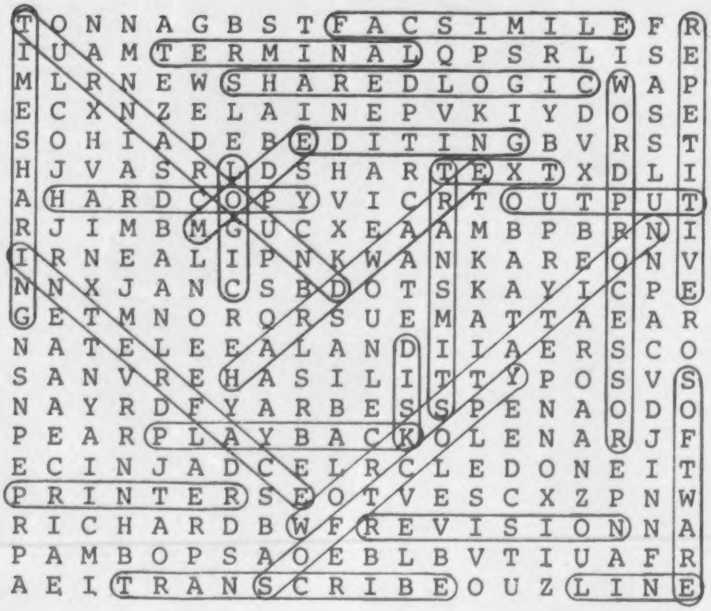
WORD PROCESSING EQUIPMENT

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1


1 RECORDINGMEDIA
2 ENDLESSLOOP
3 DESKTOP
4 RECORDER
5 TRANSCRIPTION
6 CENTRALIZED
7 INPUT
8 MAGNETIC
9 PORTABLE
10 OCR
11 DEDICATED
12 DISCRETE
13 D
14 RANDOMACCESS
15 ACCESS

Activity Sheet 2



```
T O N N A G B S T F A C S I M I L E F R
I U A M T E R M I N A L Q P S R L I S E
M L R N E W S H A R E D L O G I C W A P
E C X N Z E L A I N E P V K I Y D O S E
S O H I A D E B E D I T I N G B V R S T
H J V A S R L D S H A R T E X T X D L I
A H A R D C O P Y V I C R T O U T P U T
R J I M B M G U C X E A A M B P B R N I
I R N E A L I P N K W A N K A R E O N V
N N X J A N C S B D O T S K A Y I C P E
G E T M N O R Q R S U E M A T T A E A R
N A T E L E E A L A N D I I A E R S C O
S A N V R E H A S I L I T T Y P O S V S
N A Y R D F Y A R B E S S P E N A O D O
P E A R P L A Y B A C K O L E N A R J F
E C I N J A D C E L R C L E D O N E I T
P R I N T E R S E O T V E S C X Z P N W
R I C H A R D B W F R E V I S I O N N A
P A M B O P S A O E B L B V T I U A F R
A E I T R A N S C R I B E O U Z L I N E
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Activity Sheet 3

Stand-Alone Systems

Automatic repetitive typewriter
Display text-editor
Mechanical text-editor

Interfaced Equipment

Photocomposition equipment
OCR

Printing Mechanisms

Typebars
Laser
Fiber optic
Ink jet printers
Daisy wheels

Interactive Systems

Shared-logic text-editor
Communicating text-editor
Time-sharing text-editor

Storage Media

Core memory
Perforated tape
Laser
Magnetic tape
Built-in storage device
Magnetic floppy disks

Activity Sheet 4

Mechanical Text-Editor

Keyboard/printing unit
Recording/storage medium
Logic/intelligence device

Display Text-Editor

Visual display terminal
Printing device
Recording/storage medium
Logic/intelligence device

Activity Sheet 5

1. h
2. g
3. d
4. k
5. a
6. i
7. b
8. e
9. j
10. c
11. f

UNIT II

WORD PROCESSING EQUIPMENT

TEST--PART 1

A. From the list at the right, select the term which applies to the definition associated with input equipment used in word processing and place the letter in the appropriate space.

_____ 1. The time required to transfer information from an input unit to the location in memory where it will be stored.

_____ 2. Dictation equipment.

_____ 3. A recorder used for one type of dictation or by a specific individual.

_____ 4. Recording media which can be removed and stored, mailed, or placed in other equipment.

_____ 5. A sealed, continuous loop of magnetic tape used for recording information.

_____ 6. A device into which information can be entered.

_____ 7. Magnetic belts, cards, disks, tapes, or cassettes.

_____ 8. Singular form of the word magnetic media.

_____ 9. Optical Character Recognition Reader

_____10. The ability to find information quickly on magnetic media.

_____11. The unit in a dictation system which records dictation on a magnetic medium.

_____12. Paper or magnetic supplies used to record and store information.

a. Random access
b. Recording media
c. OCR
d. Input unit
e. Access time
f. Recorder
g. DE
h. Magnetic media
i. Dedicated recorder
j. Magnetic medium
k. Endless loop medium
l. Discrete media

B. Identify the four types of discrete media equipment used for input of information into a word processing system.

C. List the four types of discrete media used with discrete media equipment.

1.

2.

3.

4.

D. Describe endless loop media equipment.

UNIT II

WORD PROCESSING EQUIPMENT

TEST--PART 2

A. From the list at the right, select the term which applies to the definition associated with output equipment used in word processing and place the letter in the appropriate space at the left.

_____ 1. Cathode ray tube screen

_____ 2. Correcting and revising a copy before it is put into a final form and printed.

_____ 3. A device which transmits a picture of the hard copy over existing telephone lines.

_____ 4. Written, typed, or printed copy.

_____ 5. The electrical, electronic, magnetic, and mechanical devices used in a system.

_____ 6. Linking two machines or systems together.

_____ 7. A device which prints a line at a time.

_____ 8. The instructions which are programmed into a system to make it perform all designated functions.

_____ 9. The operating conditions of a unit.

_____10. The final results after input is processed, revised, and printed out.

_____11. The printing out of information which has been recorded.

_____12. Documents, such as form letters, which are played back over and over again.

_____13. Editing and making typewritten corrections.

_____14. Several text-editors use the memory and processing powers of a computer.

_____15. Information stored on a magnetic medium or on a CRT screen.

_____16. Programs which instruct or control the operations of a computer.

_____17. Any device capable of sending or receiving information over a communications channel.

_____18. To produce a typed document from recorded dictation.

_____19. To send from one person or place to another.

_____20. The actual amount of time that elapses from the point when a document is inputted to that point where it is produced in final, output form.

_____21. A work area for one person.

a. Transmit
b. Play back
c. Repetitive typing
d. Work station
e. Soft copy
f. Logic
g. Turnaround time
h. CRT screen
i. Terminal
j. Editing
k. Transcribe
l. Facsimile
m. Revision
n. Interface
o. Output
p. Software
q. Hard copy
r. Mode
s. Hardware
t. Shared-logic
u. Line printer

B. Identify the three types of stand-alone systems.

C. List the components for:

1. a display text-editor

2. a mechanical text-editor

D. Identify the three types of interactive typing systems.

E. List the two types of equipment that can be interfaced with word processing equipment.

F. List the storage media used with output equipment.

G. Identify the printing mechanisms used to print out the information which has been stored.

UNIT II

WORD PROCESSING EQUIPMENT

TEST--PART 3

A. Define the following:

1. Electronic mail

2. Dumb copier

3. Intelligent copier

4. Telecommunications

B. Identify the four types of reproduction equipment.

C. Identify the methods used for distribution of documents in a word processing system.

UNIT II

WORD PROCESSING EQUIPMENT

ANSWERS TO UNIT TEST

PART 1

A.
1. e
2. g
3. i
4. l
5. k
6. d
7. h
8. j
9. c
10. a
11. f
12. b

B. Portable units, desk-top units, centralized recording system, and transcription units.

C. Magnetic cards, disks, tape cartridges, and tape cassettes.

D. Dictation equipment which uses an endless loop of magnetic tape which is permanently enclosed in a tank to eliminate handling of the recording medium. This equipment is a centralized system with the recording and transcription units encased in the tank and is located in the word processing center. The dictation device is located in the principal's office and is connected to the tank by either private wire or telephone line systems.

PART 2

A.
1. h
2. j
3. l
4. q
5. s
6. n
7. u
8. f
9. r
10. o
11. b
12. c
13. m
14. t
15. e
16. p
17. i
18. k
19. a
20. g
21. d

B. Automatic repetitive typewriter

Mechanical text-editor

Display text-editor

C. 1. Visual display terminal, printing device, recording/storage medium, and logic/intelligence device.

2. Keyboard/printing unit, recording/storage medium, and logic/intelligence device.

D. Communicating stand-alone text-editor, shared logic-text-editor, and time-sharing text-editor.

E. Photocomposition equipment and optical character recognition reader (OCR).

F. Perforated paper tape, magnetic tape, magnetic floppy disks, core memory, built-in storage devices.

G. Typebars, elements, daisy wheels, ink-jet printers, laser pictures, fiber optic pictures.

PART 3

A. 1. Electronic mail--communications transmitted in digital code between locations and reproduced on paper at the distination.

2. Dumb copier--a copier without a microcomputer; reproduces copy from a hard copy.

3. Intelligent copier--a copier with a "brain"; contains a microcomputer; creates images electronically.

4. Telecommunications--the transmission of information between locations by means of electrical or electromagnetic systems.

B. Carbon copies, automatic typewriter, office copiers, and duplicators.

C. U. S. Postal Service, interdepartmental mail, messenger, data communications, communicating word processors, Telex or TWX, and facsimile.

UNIT III

WORD PROCESSING PROCEDURES

UNIT OBJECTIVE

After completion of this unit, the student will be able to classify and sequence procedures used in word processing. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Define terms associated with procedures used in word processing.
2. Lists the methods of input.
3. Discuss how input is transmitted to the word processing center.
4. Lists the forms of output.
5. Identify the equipment that is used to process output.
6. Identify methods of output.
7. List the methods for internal and external distribution of a document.
8. Summarize the production cycle for a document.

UNIT III

WORD PROCESSING PROCEDURES

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

   A. Obtain procedures manuals from a company which incorporates word processing to show students how these manuals are used to assist in the processing and the flow of information through a word processing system.

   B. Design a bulletin board showing the flow of work through a word processing system. (May be similar to the transparency master on page 103.)

   C. Gather any resources and references to provide additional information to supplement the unit.

   D. Arrange for a word processing manager to speak to the class about the following:

      1. Types of input methods used in a word processing system.

      2. Types of equipment used in output of information.

      3. Methods of output.

      4. Methods of distribution and communication of information.

II. Objective Sheet

   A. Discuss the unit and specific objectives.

   B. Add any additional objectives necessary to fully meet the needs of the students.

III. Information and Activity Sheets

   A. Discuss the terms and definitions.

      1. Provide examples when necessary to facilitate the discussion.

      2. Have students complete Activity Sheet 1--TERMINOLOGY.

   B. Discuss the input procedures listed.

      1. Have the students discuss the pros and cons of using the various methods of input.

      2. Have the word processing manager discuss the types of input methods used by his/her company and the reasons

for using the input methods.

C. Discuss the types of output procedures listed.

  1. Emphasize the types of equipment used in the output of information.

  2. Discuss the methods of output and provide examples when necessary to clarify the discussion.

D. Discuss the types of methods used for the distribution/communication of information.

  1. Provide examples when necessary to clarify the discussion.

  2. Have students complete Activity Sheet 2--EQUIPMENT CATEGORIES.

E. Discuss the document production cycle.

  1. Use TM-1--THE WORD PROCESSING CYCLE to reinforce the discussion.

  2. Have students complete Activity Sheet 3--DOCUMENT PRODUCTION CYCLE.

IV. Answers to Activity Sheets

A. Answers are provided for the activity sheets.

B. Prepare answers for any activity sheets added to the unit.

V. Unit Test

A. Various approaches may be used in testing.

  1. May be used as an additional activity.

  2. Each part may be given as the information is completed.

  3. May be given upon completion of the entire unit.

B. Add test parts for any information added to the unit.

VI. Answers to Unit Test.

A. Answers are provided.

B. Prepare answers for any questions added to the test.

VII. Resources and References

A. Books

1. MANAGEMENT OF WORD PROCESSING OPERATIONS
   Paula B. Cecil
   The Benjamin/Cummings Publishing Co., Inc.
   2727 Sand Hill Road
   Menlo Park, CA 94025

2. WORD PROCESSING: OPERATIONS, APPLICATIONS, AND ADMINISTRATION
   Kleinschrod, Kruk, and Turner
   Bobbs-Merrill Educational Publishers
   4300 W. 62nd Street
   Indianapolis, IN 46268

3. WORD PROCESSING
   Joyce J. Caton
   Milliken Publishing Co.
   St. Louis, Missouri

B. Magazines

1. THE OFFICE
   Office Publications, Inc.
   P. O. Box 13205
   Philadelphia, PA 19101

2. MODERN OFFICE PROCEDURES
   P. O. Box 95759
   Cleveland, OH 44101

3. WORDS
   IWP Association
   Maryland Road
   Willow Grove, PA 19090

UNIT III

WORD PROCESSING PROCEDURES

INFORMATION SHEET

Procedures make up the third component of a word processing system. To understand the word processing concept, you must become familiar with the input/output processes. The procedures that make up word processing systems are classified as input procedures, output procedures, and distribution/communication procedures. In most word processing systems, the people involved in word processing are provided with procedure manuals to assist them in processing the information through the system. This unit provides information regarding the flow of work through a word processing system and the steps used.

I. Terms and Definitions

A. Input

1. Active document--a document requiring original thought, which includes research, organization, proofreading, and revision.
2. Document--a copy.
3. Draft--a rough, unedited copy.
4. Hard copy--written, typed, or printed material; a document.
5. Input--information or ideas in a raw form; submission of work to a word processing center.
6. Input unit--a device into which information can be entered; a dictation/recorder.
7. Input equipment--dictation equipment.
8. Job ticket--a form, attached to the work that is to be completed, which provides the word processing specialist with the information necessary to complete the project.
9. Logging--recording incoming and outgoing work.
10. Longhand--words written by hand.
11. Principal--an individual who originates paperwork; originator.
12. Procedure--the step-by-step process for completing a job.
13. Schedule log--a form, prepared and maintained by a supervisor, designed to keep track of incoming and outgoing work in the word processing center.

B. Output

1. Backlog--work that has to be completed.
2. Batch--a collection of similar work that can be processed at one time.
3. Boiler plate--parts of other documents or paragraphs that are combined to construct a new document.
4. Form letter--the same letter to be sent to a number of different people; usually prepared in advance and duplicated.
5. Master--the original copy from which duplicates are made.
6. Output--the final product after recorded input is processed, revised, and played out.
7. Output equipment--automated typing systems.
8. Playback--the automatic typing out of recorded text.
9. Prerecorded--material stored on magnetic media for repetitive use.
10. Proofreading--reading copy to find and mark errors for correction.
11. Repetitive typing--typing a text more than once.
12. Soft copy--information stored on a magnetic medium or on a CRT screen.
13. Transcription--to produce typed copy from information recorded on a medium or on paper.

II. Input Procedures

The flow of work begins when an idea or information is created by the principal/originator. The idea or information must then be put into a form that can be transmitted to the word processing center for production. The form of input from which the word processing specialist produces a final document greatly affects the time required to transcribe the work.

A. Methods of Input. Several categories of input are used in word processing.

1. Machine dictation is the fastest, easiest means of input. The principal talks into some form of dictation equipment which records the words onto a recording medium for later transcription.

2. Longhand is the slowest means of input, the most difficult to produce, and expensive in regards to the amount of time spent writing and producing the document.

3. Shorthand is faster than longhand, costly in that it requires the time of two persons and time is lost between dictation and transcription.

4. Form letters are repetitive letters which are to be sent to a number of people. The body of the letter is stored on magnetic medium which is played out automatically. As this is played out, the variable information is keyboarded in by the WP specialist, such as the date, inside address, salutation.

5. Dictation at the typewriter. The WP specialist keyboards the material as it is being dictated by the principal.

6. Form dictation. The WP specialist keyboards the information onto a printed form as it is being dictated by the principal.

B. Methods of transmitting input. Once the information and ideas are put onto a medium or hard copy form, they are sent to the WP center in one of the following ways:

1. Hand carried by a messenger if it is hard or soft copy.

2. Sent over private wire or telephone lines to the recorder located in the WP center.

III. Output Procedures

In word processing, the output is the final document that has been prepared by typing or printing.

A. Forms of Output

1. Letters
2. Memorandums
3. Reports
4. Drafts
5. Forms
6. Statistical information

B. Output Equipment. The following equipment may be used to process the work in the WP center:

1. Automatic typewriters
2. Mechanical stand-alone text-editors
3. Visual display text-editors
4. Communicating text-editors
5. Shared logic text-editors
6. Time-sharing text-editors
7. OCR scanner
8. Photocomposition equipment
9. Printers

C. Methods of Output. A final document may be prepared in one of the following ways using WP equipment.

1. Repetitive typing. The material remains unchanged from one copy to the next and contains no variable information. As the material is keyboarded, it is stored on a magnetic medium which eliminates the rekeyboarding of the material. The medium is placed in any automatic typewriter or printer which automatically plays out the document the required number of times.

2. Combined repetitive and variable typing. The material has constant as well as variable information, such as a form letter in which the body of the letter remains the same but the date and inside address are different for each letter. The repetitive information is stored on magnetic medium for playout. As the repetitive material is played out automatically, the variable information is manually keyboarded by the WP specialist.

3. Transcription process. A final document is prepared as the WP specialist transcribes dictation recorded on a medium, in shorthand, or in longhand.

4. Editing and revising process. This process is used for output of long, complex documents such as reports and statistical documents. In this process, the WP specialist keyboards a rough draft of the material. The rough draft is returned to the principal for editing and revising, and is then returned to the WP specialist. Using the magnetic medium that was prepared during the first keyboarding, a copy is automatically played out with the WP specialist manually keyboarding changes made on the rough draft by the principal. The corrected copy is sent to the principal for additional revising. This process is repeated until the principal is satisfied; then a final document is prepared.

5. Photocomposition process. A final document is prepared using photocomposition equipment which produces a photographic image of the original material.

IV. Distribution/Communication Procedures

The final step in processing work is the distribution/communication of the document. Once the final document is approved by the principal, it is distributed or communicated in one of the following ways.

A. Internal methods

1. Departmental mail

2. Messenger

3. Personal

B. External methods

1. U. S. Postal Service

2. Electronic Mail

a. Data communications

b. Communicating word processors

c. Telex or TWX

d. Facsimile

V. Document Production Cycle

The following information traces the flow of work through the word processing system from creation of input to distribution of output.

A. Creation of Input. The work flow begins with the principal who originates the words. Using one of the methods of input, the principal records the words for transcription. Before the work is sent to the word processing center for production, the principal prepares a job request form which is attached to the work to provide the information necessary to process the work.

PHOTO COURTESY OF LANIER BUSINESS PRODUCTS INC

B. Transmission of input. The material is sent to the WP center either as dictation recorded on a medium or as hard copy.

C. Production of output. The work is received in the WP center by the supervisor who assigns a number to the work and records it in the schedule log. After the job is recorded, the following steps occur in the production of a document.

1. The work is assigned by the supervisor. Before the material is assigned, the supervisor reviews the material to determine how and by whom the work will be done. This is based on the difficulty of the work, the skills of the WP specialist, and the capabilities of the machines. The supervisor prepares a job ticket, attaches it to the material, and gives the work to the WP specialist.

2. The document is prepared by the WP specialist following these steps:
    - a. Keyboards the material, using WP equipment.
    - b. Records the material on a magnetic medium as it is being keyboarded.
    - c. Prints out a final copy.
    - d. Proofreads the copy.
    - e. Gives the copy to the proofreader for checking.
    - f. Makes any corrections necessary.
    - g. Returns completed work to supervisor who records the date and time work was completed.

PHOTO COURTESY OF LANIER BUSINESS PRODUCTS INC.

3. The document is returned to the principal for approval.
    - a. If revisions are made by the principal, the document is returned to the WP specialist for changes.
    - b. After the document is approved by the principal, it is ready for distribution.

D. Reproduction and Distribution of final document. After the document is approved for distribution,

1. A copy of the document is made and filed for future reference.

2. The final document is distributed/communicated using one of the following methods:

    a. Hand delivery

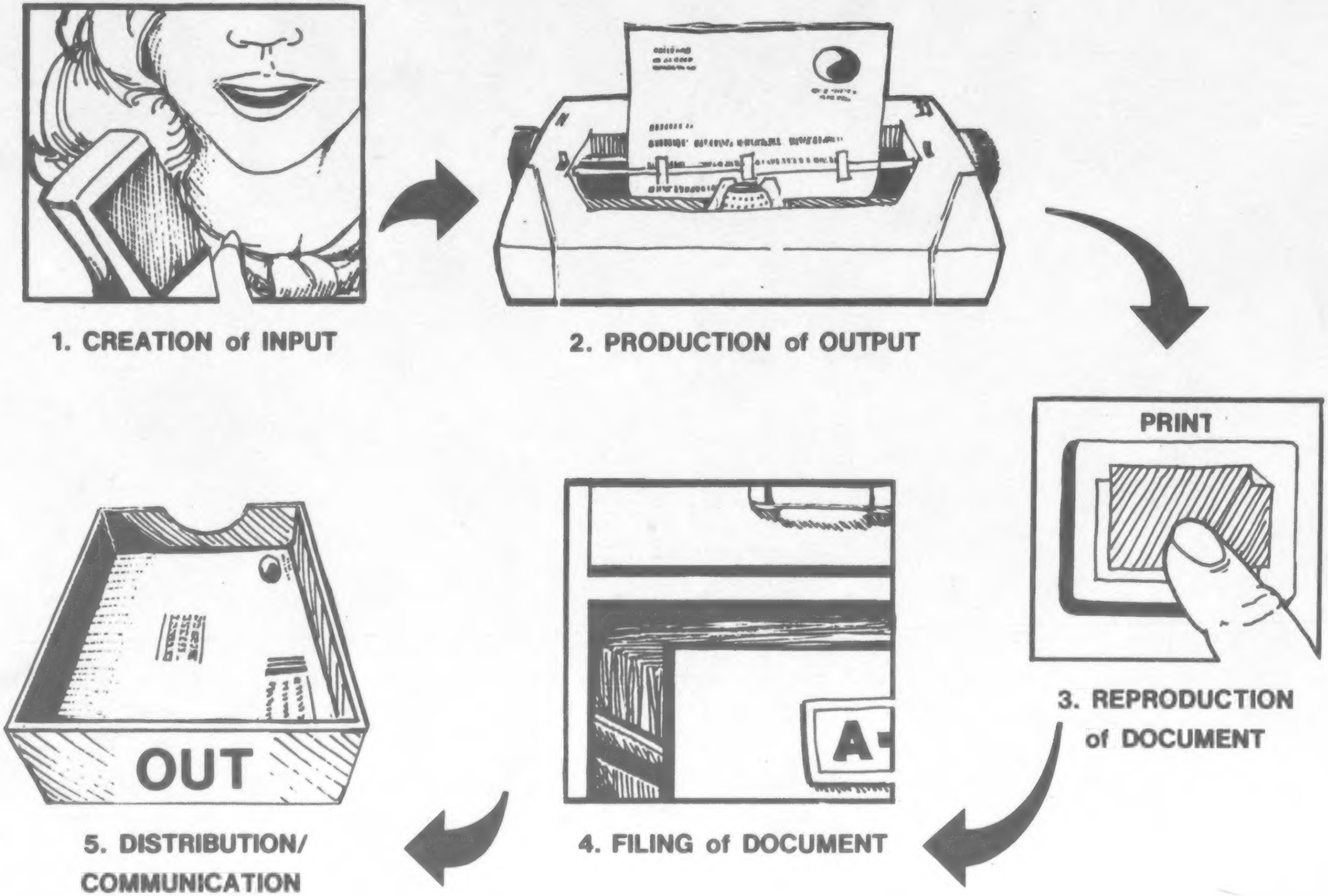
    b. Mailing

    c. Transmission by facsimile

    d. Electronic document distribution, such as communicating text-editors.

PHOTO COURTESY OF XEROX CORP.

THE WORD PROCESSING CYCLE



1. CREATION of INPUT

2. PRODUCTION of OUTPUT

3. REPRODUCTION of DOCUMENT

4. FILING of DOCUMENT

5. DISTRIBUTION/ COMMUNICATION

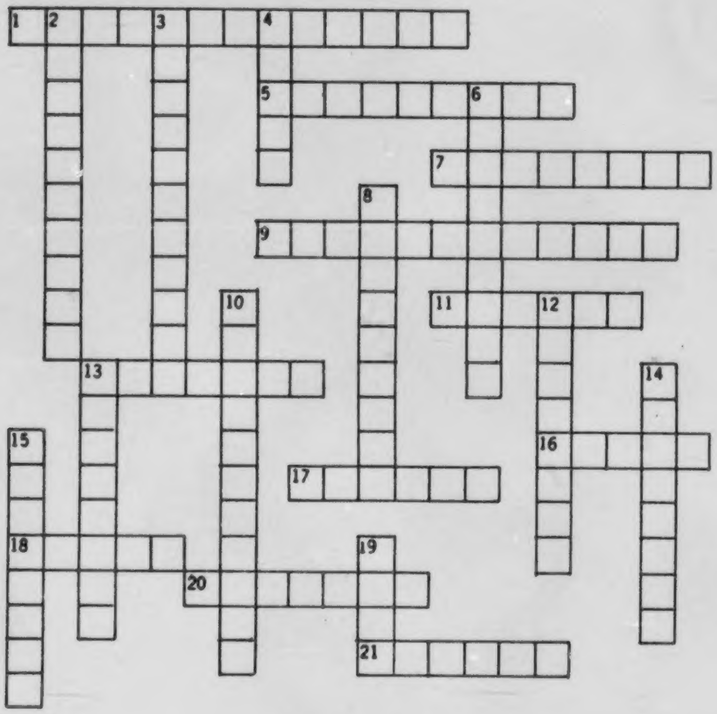
TM-1

UNIT III

WORD PROCESSING PROCEDURES

ACTIVITY SHEET 1--TERMINOLOGY

DIRECTIONS: Fill in the correct terms in the crossword puzzle.



ACROSS

1. To produce typed copy from information recorded on a medium or on paper.
5. An individual who originates paperwork.
7. Information stored on a magnetic medium or on a CRT screen.
9. Reading copy to find and mark errors for correction.
11. The final product after recorded input is processed, revised, and played out.
13. Recording incoming and outgoing work.
16. A collection of similar work that can be processed at one time.
17. A document requiring original thought is called an ______document.
18. A rough, unedited copy.
20. Work that has to be completed.
21. The original copy from which duplicates are made.

DOWN

2. Typing a text more than once is called ______typing.
3. A form designed to keep track of incoming and outgoing work in the word processing center.
4. Submission of work to a word processing center.
6. The step-by-step process of completing a job.
8. A form which provides the word processing specialist with the information necessary to complete the project.
10. Parts of other documents or paragraphs that are combined to construct a new document.
12. The automatic typing out of recorded text.
13. Words written by hand.
14. A copy.
15. Written, typed or printed material.
19. The same letter sent to a number of different people is called a __letter.

UNIT III

WORD PROCESSING PROCEDURES

ACTIVITY SHEET 2--EQUIPMENT CATEGORIES

DIRECTIONS: From the list of words below, write each term under the appropriate category with which it is normally associated.

- Departmental mail
- Machine dictation
- Automatic typewriter
- Messenger
- Photocomposition
- Facsimile
- OCR
- Form dictation
- Printers
- Repetitive typing
- Longhand
- Form letters
- Transcription
- Communicating text-editor
- U.S. Postal Service
- Editing and revising
- Data communications
- Combined repetitive and variable
- Shorthand
- Telex-TWX
- Mechanical text-editor

INPUT

____

____

____

____

____

____

____

____

OUTPUT

____

____

____

____

____

____

____

____

COMMUNICATION/DISTRIBUTION

____

____

____

____

____

____

____

____

UNIT III

WORD PROCESSING PROCEDURES

ACTIVITY SHEET 3--DOCUMENT PRODUCTION CYCLE

DIRECTIONS: Briefly describe the four steps in the production cycle of a document.

1.

2.

3.

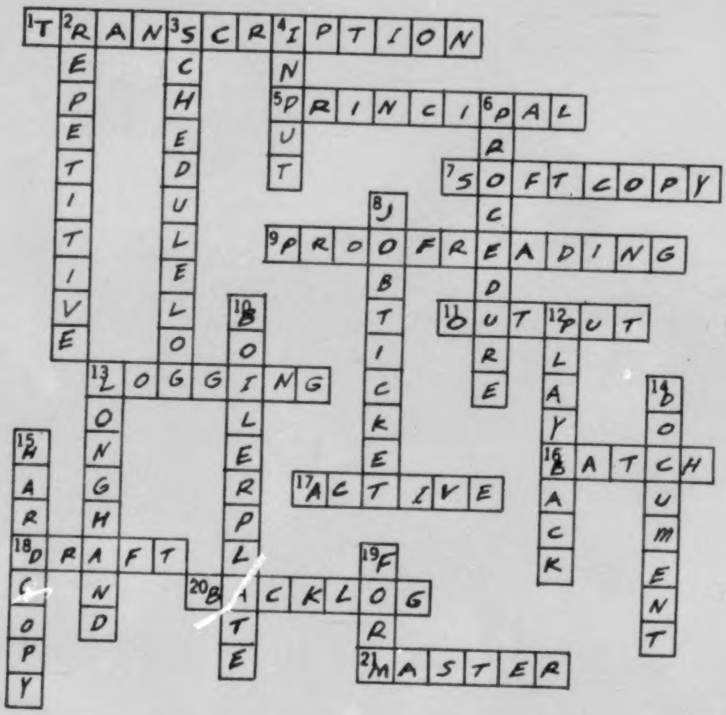
4.

WORD PROCESSING PROCEDURES

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

Across


1 TRANSCRIPTION
2 REPETITIVE
3 SCHEDULELOG
4 INPUT
5 PRINCIPAL
6 PROCEDURE
7 SOFTCOPY
8 JOBTICKET
9 PROOFREADING
10 BOILERPLATE
11 OUTPUT
12 PLAYBACK
13 LOGGING
13 LONGHAND
14 DOCUMENT
15 HARDCOPY
16 BATCH
17 ACTIVE
18 DRAFT
19 FORM
20 BACKLOG
21 MASTER

Activity Sheet 2

Input	Communication/Distribution	Output
Machine dictation	Departmental mail	Automatic typewriter
Messenger	Messenger	Photocomposition
Form dictation	Facsimile	OCR
Longhand	Communicating text-editor	Printers
Form letters	U. S. Postal Service	Repetitive typing
Shorthand	Data communications	Transcription
	Telex/TWX	Editing/revising
		Combined repetitive and variable
		Communicating text-editor
		Mechanical text-editor

Activity Sheet 3

1. Creation of input--principals create documents and letters.
2. Transmission of input--material is sent to word processing center.
3. Production of output--work is logged and assigned by the supervisor. The word processing specialist prepares the document. The completed document is logged out and returned to the principal.
4. Distribution/communication--document is copied, filed, and distributed.

UNIT III

WORD PROCESSING PROCEDURES

TEST

A. Match the terms associated with word processing procedures to the correct definitions by placing the letter in the appropriate space.

_____ 1. A document requiring original thought, which includes research, organization, proofreading, and revision.

_____ 2. A copy.

_____ 3. A rough, unedited copy.

_____ 4. Written, typed, or printed material.

_____ 5. Information or ideas in a raw form.

_____ 6. A device into which information can be entered; a dictation/recorder.

_____ 7. Dictation equipment.

_____ 8. A form, attached to the work that is to be completed, which provides the word processing specialist with the information necessary to complete the project.

_____ 9. Recording incoming and outgoing work.

_____10. Words written by hand.

_____11. An individual who originates paperwork; originator.

_____12. The step-by-step process for completing a job.

_____13. A form, prepared and maintained by a supervisor, designed to keep track of incoming and outgoing work in the word processing center.

_____14. Work that has to be completed.

_____15. A collection of similar work that can be processed at one time.

_____16. Parts of other documents or paragraphs that are combined to construct a new document.

_____17. The same letter to be sent to a number of different people.

_____18. The original copy from which duplicates are made.

_____19. The final product after recorded input is processed.

_____20. Automated typing systems.

_____21. The automatic typing out of recorded text.

_____22. Material stored on magnetic media for repetitive use.

_____23. Reading copy to find and mark errors for correction.

_____24. Information stored on a magnetic medium or on a CRT screen.

_____25. Typing a text more than once.

_____26. To produce typed copy from information recorded on a medium or on paper.

a. Boiler plate
b. Procedure
c. Soft copy
d. Draft
e. Form letter
f. Job ticket
g. Active document
h. Repetitive typing
i. Master
j. Document
k. Schedule log
l. Hard copy
m. Input equipment
n. Principal
o. Output equipment
p. Playback
q. Transcription
r. Input
s. Prerecorded
t. Proofreading
u. Input unit
v. Logging
w. Output
x. Backlog
y. Longhand
z. Batch

B. List the methods of input.

C. Discuss how input is transmitted to the word processing center.

D. List the forms of output.

E. Identify the equipment that is used to process output.

F. Match the term associated with methods of output to the correct definition by placing the letter in the appropriate space.

_____ 1. The material remains unchanged from one copy to the next and contains no variable information.

_____ 2. The material has constant as well as variable information.

_____ 3. A final document is prepared as the WP specialist transcribes dictation recorded on a medium, in shorthand, or in longhand.

_____ 4. The WP specialist keyboards a rough draft of the material. The rough draft is edited and revised by the principal then returned to the specialist for changes. The corrected copy is then sent to the principal for approval.

a. Editing and revising process

b. Transcription process

c. Repetitive typing

d. Combined repetitive and variable typing

G. List the methods for internal and external distribution of a document.

H. Summarize the production cycle for a document.

UNIT III

WORD PROCESSING PROCEDURES

ANSWERS TO UNIT TEST

A.

1. g
2. j
3. d
4. l
5. r
6. u
7. m
8. f
9. v
10. y
11. n
12. b
13. k
14. x
15. z
16. a
17. e
18. i
19. w
20. o
21. p
22. s
23. t
24. c
25. h
26. q

B. Machine dictation, longhand, shorthand, form letters, dictation at the typewriter, and form dictation.

C. Input can be carried by a messenger if it is hard or soft copy or it can be sent over private wire or telephone lines to the recorder located in the WP center.

D. Letters, memorandums, reports, drafts, forms, and statistical information.

E. Automatic typewriters, mechanical and display stand-alone text-editors, communicating, shared-logic, and time-sharing text-editors, OCR scanner, photocomposition equipment, and printers.

F.

1. c
2. d
3. b
4. a

G. Internal--departmental mail, messenger, and personal

External--U. S. Postal Service, data communications, communicating word processors, Telex or TWX, and facsimile

H. The document is created by the principal using one of the methods of input. The principal attaches a job request form to the work and sends it to the WP center. The supervisor assigns a number and records the work in the schedule log then assigns the work to a WP specialist. The supervisor prepares a job ticket, attaches it to the work and gives it to the WP specialist who prepares the work. After the document is prepared, the WP specialist returns it to the supervisor to be logged out and returned to the principal for approval. After the document is approved, it is reproduced, filed, and distributed.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

UNIT OBJECTIVE

After completion of this unit, the student will be able to identify computer terminology, equipment, and language. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Identify uses and characteristics of microcomputers.
2. Match computer terms to definitions.
3. Identify characteristics of computers.
4. Identify parts of a computer.
5. Identify peripheral equipment.
6. List programming languages.
7. Identify basic components of a microcomputer.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

A. Subscribe to a magazine or magazines from the sources provided so students will have access to up-to-date resources.

B. Obtain brochures and information regarding microcomputers from the sources provided.

C. Gather any resources and references to provide additional information to supplement the unit.

D. Design a bulletin board using pictures and brochures obtained from the manufacturers.

II. Objective Sheet

A. Discuss the unit and specific objectives.

B. Add any additional objectives necessary to fully meet the needs of the unit.

III. Information Sheets and Activities

A. Information Sheet 1--OVERVIEW OF MICROCOMPUTERS

1. Discuss the information presented.

2. Provide students with magazines regarding the use of microcomputers. Have them read and report on one area of use for a microcomputer.

B. Information Sheet 2--TYPES OF COMPUTERS

1. Discuss the terms and information presented.

2. Emphasize the differences in each type of computer.

3. Have students complete Activity 2.

C. Information Sheet 3--PARTS OF A COMPUTER

1. Discuss the information presented.

2. Arrange for a computer vendor or a computer science instructor to speak to the class about the parts of a computer and their functions.

3. Have students complete Activity 3.

D. Information Sheet 4--PERIPHERAL DEVICES

1. Discuss the terms and definitions.

2. Use pictures and brochures obtained from the manufacturers to illustrate the different types of peripheral devices.

3. Discuss the information presented emphasizing input, output, and storage devices.

4. Arrange for a field trip to a company that has computer equipment so students will have an opportunity to see the equipment in use.

   (NOTE: A junior college or senior college computer center is an excellent place to visit.)

5. Have students complete Activities 4 and 5.

E. Information Sheet 5--COMPUTER LANGUAGES AND SOFTWARE

1. Discuss the terms and definitions.

2. Discuss the types of programming languages.

3. Discuss the types of software available and the sources.

4. Other sources may be used to provide a more indepth study of languages and software.

5. Have students complete Activity 6.

F. Information Sheet 6--MICROCOMPUTERS

1. Discuss the parts of a microcomputer comparing this to the information presented in Information Sheet 3.

2. Arrange for a microcomputer vendor to visit the class to demonstrate and discuss the use of a microcomputer.

3. Have students complete Activity 7.

IV. Answers to Activities

V. Unit Test

A. Various approaches may be used in testing.

1. Administer the test when the information sheets are completed.

2. Use the test as an additional activity.

3. Give the test upon completion of the unit.

B. Add test parts corresponding to any information areas or sheets added to the unit.

VI. Answers to Unit Test

VII. Resources and References

A. Books

1. GUIDE TO MICROCOMPUTERS
Fronz J. Frederick
AECT Publications Sales
1126 Sixteenth St. N.W.
Washington, DC 20036

2. MINICOMPUTER SYSTEMS
M. Vardell Lines and
Boeing Computer Services Co.
Winthrop Publishers, Inc.
17 Dunter Street
Cambridge, MA

3. MICROCOMPUTER MANAGEMENT AND PROGRAMMING
Carol Anne Ogdin
Prentice-Hall, Inc.
Englewood Cliffs, NJ 07632

4. COMPUTER CONCEPTS
Marilyn Bohl
SRA
259 East Erie Street
Chicago, IL. 60611

5. BASIC PRINCIPLES OF DATA PROCESSING
James A. Saxon and Wesley W. Steyer
Prentice-Hall, Inc.
Englewood Cliffs, NJ 07632

6. MICROCOMPUTER'S AND THE 3R'S A GUIDE FOR TEACHERS
Christine Doerr
Hayden Book Company, Inc.
Rochelle Park, NJ.

7. THE HOME COMPUTER
Len Buckwalter
Wallaby Pocket Books
Gulf and Western Corporation
1230 Avenue of the Americas
New York, NY 10020

8. WHAT IS A COMPUTER
Marion J. Ball
Houghton and Mifflin Company
Dallas, TX.

9. GETTING ACQUAINTED WITH MICROCOMPUTERS
Louis E. Frenzel, Jr.
Howard W. Sams and Co., Inc.
Indianapolis, IN. 46268

10. TEN-STATEMENT SPIRAL BASIC FROM CALCULATOR TO COMPUTER
    Richard E. Mayer
    Glencoe Publishing Co., Inc.
    17337 Ventura Boulevard
    Encino, CA 91316

11. USING MICROPROCESSORS AND MICROCOMPUTERS
    THE 6800 FAMILY
    Joseph D. Greenfield
    William C. Wray
    Joseph Wiley and Sons, Inc.
    One Wiley Drive
    Somerset, NJ 08873

B. Magazines

1. BYTE: THE SMALL SYSTEMS JOURNAL
   70 Main St.
   Peterborough, NH 03458

2. CREATIVE COMPUTING: THE MAGAZINE OF RECREATIONAL AND EDUCATIONAL COMPUTING
   P. O. Box 789-M
   Morristown, NJ 07968

3. INTERFACE AGE: MICROCOMPUTING FOR HOME AND SMALL BUSINESS
   13913 Artesia Blvd.
   Cerritos, CA 90701

4. KILOBAUD: THE SMALL COMPUTER MAGAZINE
   Peterborough, NH 03458

5. PERSONAL COMPUTING
   167 Corey Rd.
   Brookline, MA 02146

C. Manufacturers

1. Apple Computer, Inc.
   10260 Bandley Drive
   Cupertino, CA 95014

2. Synertek Systems
   150 S. Wolfe Rd.
   Sunnyvale, CA 94086

3. Texas Instruments, Inc.
   P. O. Box 225012
   Dallas, TX 75265

4. Intel Corporation
   3065 Bowers Ave.
   Santa Clara, CA 95051

5. Radio Shack
   Tandy Corporation
   1300 One Tandy Center
   Fort Worth, TX 76102

6. Rockwell International
   Electronic Device Division
   3310 Miraloma Avenue
   P. O. Box 3669
   Anaheim, CA 92803

7. Zenith Data Systems Corporation
   1000 Milwaukee Avenue
   Glenview, IL 60025

8. Digital's Computer Store
   1625 W. Mockingbird, Suite 114
   Dallas, TX 75235

9. Commodore Business Machines
   901 California Avenue
   Palo Alto, CA 94303

10. Motorola Semiconductor Products, Inc.
    3501 Ed Bluestein Blvd.
    Austin, TX 78721

11. A. B. Dick Co.
    Dept. B12-WPS
    5700 W. Touhy Avenue
    Chicago, IL 60648

12. Vector
    31364 Via Colinas
    Westlake Village, CA 91362

13. Royal Business Machines, Inc.
    150 New Park Avenue
    Dept. 510
    Hartford, CT 06106

14. I.B.M. Corporation
    General Systems Division
    P. O. Box 2068
    Atlanta, GA 30301

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

INFORMATION SHEET 1--OVERVIEW OF MICROCOMPUTERS

I. Definition and characteristics of a microcomputer

A. Definition--A microcomputer is a tiny computer built around a few integrated circuit "chips" which contain the central processing unit, the memory, and the input/output system.

B. Characteristics

1. Relatively inexpensive
2. Easy to use
3. Portable as a typewriter
4. Fits on a desk or table
5. Needs no special electrical or environmental control requirements
6. Doesn't require a data processing expert to operate it
7. Can usually handle both word processing and data processing work
8. Usually owned by individuals

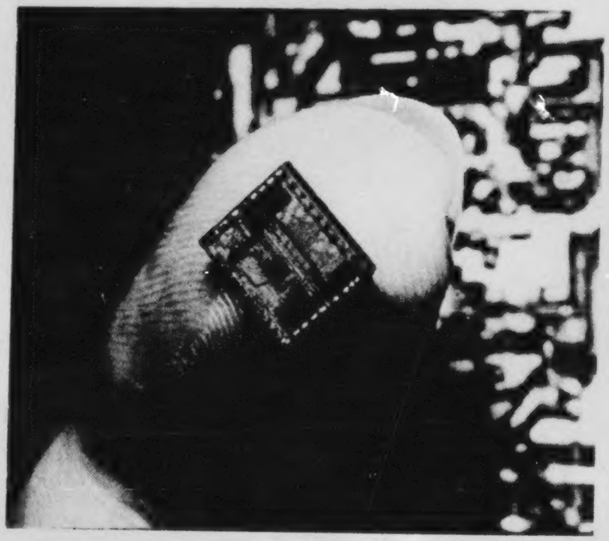


PHOTO COURTESY OF INTEL CORP.

II. Applications of a microcomputer

Many people think of a microcomputer as being used for home/personal, games, or instructional uses. These are just a few ways in which the microcomputer has been used. Now use of microcomputers in offices and small businesses to perform many functions saves time, effort, and money, and improves the speed and accuracy of work being done. The following information shows the many ways in which microcomputers are being used:

A. Personal applications--Individuals are using microcomputers to do:

1. Personal tax and financial planning
2. Personal recordkeeping

3. Home management (budgeting)
4. Investment analysis
5. Statistics

B. Entertainment applications--Types of computer games available for use in the home are:

1. Sports games
2. Guessing games
3. Musical games
4. Card games

C. Educational applications--Microcomputers are being used as instructional aids in the classroom to improve and provide additional instruction in the following areas:

1. Math
2. Science
3. Social studies
4. Grammar/English
5. Foreign languages
6. Reading
7. Data processing (computer science)
8. Business and office education

D. Business and office applications--Businesses are using microcomputers to assist them in the following areas:

1. Data collection
    a. Inventory control
    b. Payroll
    c. Accounts payable and receivable
    d. Statistical analysis
    e. Sales
    f. Graphs and charts
    g. Terminals to large computers

2. Word processing
    a. Text-editing with capabilities to write, revise, edit, and print all types of documents.
    b. Form letters
    c. Reports
    d. Mailing lists
    e. Electronic mail

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 1--RESEARCH

Choose one of the four areas of application for a microcomputer; write a report on the application selected or visit a local business which uses a microcomputer to get background and specific applications of the microcomputer. Present the findings of your report to the class.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

INFORMATION SHEET 2--TYPES OF COMPUTERS

I. Terms and Definitions

A. Applications--refers to the different uses or functions that a computer can perform or be used for.

B. Bit--the contraction for binary digit; the smallest unit of information in a binary system of notation.

C. Byte--a series of bits; eight (8) bits equal one (1) byte.

D. General-purpose computer--a machine that can perform many kinds of jobs.

E. Interfaced--linked or joined together.

F. K (Kilobyte)--a measure of the memory capacity of a computer; K equals 1024 bytes. 4K of memory means the computer has 4,096 bytes of memory (4K = 4 x 1024 = 4,096).

G. Memory--that part of the computer which stores programs and data.

H. Memory capacity--the size of memory available in a computer to store data and programs; the number of bytes that can be stored in computer's memory.

I. Peripheral devices--external equipment or units which are attached to the computer; used to provide printouts from the computer, or to provide more data storage.

J. User--the person operating the computer.

K. Word--another term for byte or group of bytes; the basic unit of data for a computer; a number, a letter, or a code.

II. Types of Computers

Computers vary in size, cost, and computer power (speed to process data and memory capacity). A quick comparison of some computers available and their characteristics will help in understanding the abilities of a microcomputer.

A. Electronic calculator

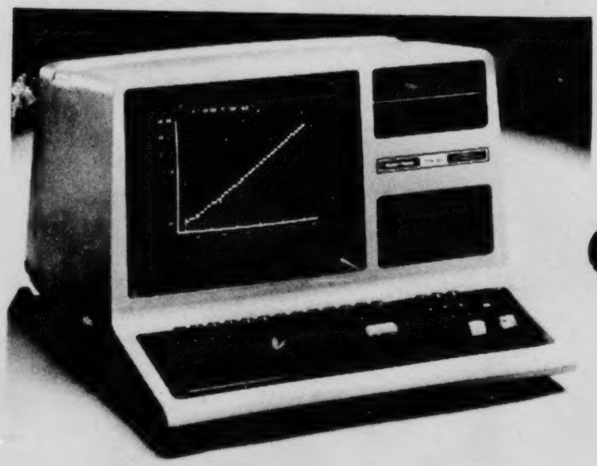
1. Simplest type of computer
2. Low in cost
3. Limited memory capacity
4. Limited peripheral support

HOW MANY SHARES?

PHOTO COURTESY OF RADIO SHACK

B. Microcomputers

1. Costs range from $300 to $5,000
2. Limited in volume of data it can process
3. Memory capacity can be expanded up to 64K
4. Used to perform specific applications
5. Supports peripheral devices



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C. Minicomputers

1. Costs range from $5,000 to $400,000
2. Can process larger volumes of data than a microcomputer
3. Memory capacity can be expanded from 32K to 128K
4. Can perform a variety of functions
5. Supports peripheral devices

PHOTO COURTESY OF INTEL CORP

D. Mainframe (large-scale) computer

1. Largest, most powerful, and most expensive computer available
2. Can handle large volumes of data and sophisticated problems
3. Memory capacity can be expanded to millions of words
4. Support peripheral devices

III. Functions of a Computer

The computer is just one part of an information processing system. It is a machine in a group of machines, people, and procedures organized to convert information into a more usable form.

A. To process information and to control peripheral equipment.

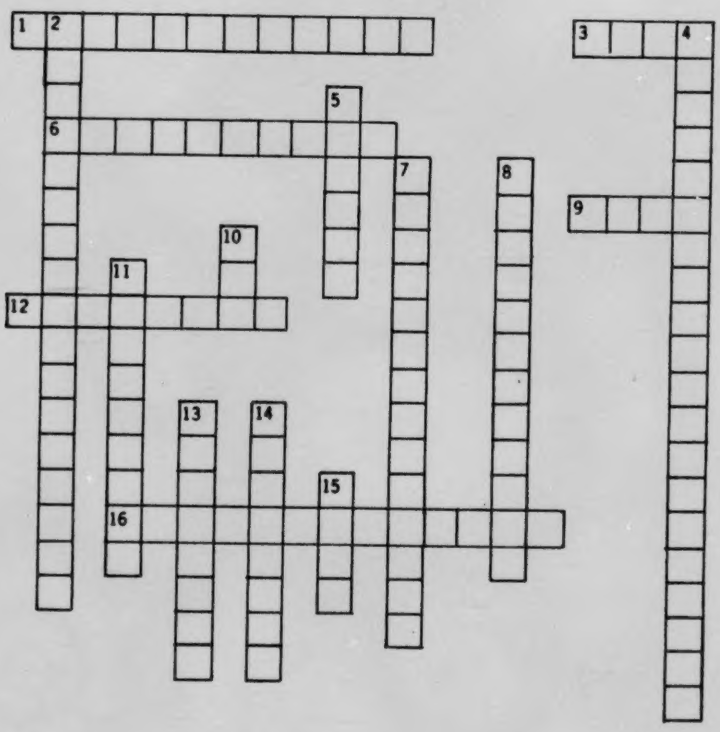
B. To support data input and output activities.

C. A tool which helps a person perform certain types of work faster and improve accuracy.

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 2--TERMINOLOGY

DIRECTIONS: Fill in the correct terms in the crossword puzzle.



ACROSS

1. The different uses or functions that a computer can perform or be used for.
3. A series of bits.
6. Linked or joined together.
9. The person operating the computer.
12. The size of memory available in a computer to store data and programs is called _______.
16. Smaller than a minicomputer and can support peripheral devices.

DOWN

2. External equipment.
4. Simplest type of computer which has limited peripheral support.
5. That part of the computer which stores programs and data.
7. A computer that can perform many kinds of jobs.
8. Can process larger volumes of data than a microcomputer; cost ranges from $5,000 to $100,000.
10. The contraction for binary digit.
11. The largest, most powerful and most expensive computer available.
13. Synonym for duty.
14. K is the abbreviation for this word.
15. Another term for byte.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

INFORMATION SHEET 3--PARTS OF A COMPUTER

I. Parts of a computer

Regardless of size, shape, expense, and levels of ability, every computer has certain basic parts:

- A. Central processing unit (CPU)
- B. Memory
- C. Input/Output system (I/O)

II. Central processing unit--the "brains" of the computer

- A. Functions
  - 1. To control the other components of the system.
  - 2. To perform computations and make decisions.
- B. Parts of a CPU
  - 1. Control unit
    - a. Responsible for the automatic and decision-making characteristics of the computer.
    - b. Retrieves instructions from the memory, interprets instructions, and sends control signals to other parts of the computer based on these instructions or "program".
  - 2. Arithmetic/logic unit (ALU)
    - a. Carries out most of the operations designated by the computer's instruction set.
    - b. Performs calculations and makes decisions.

III. Memory--the part of the computer where information is stored

- A. Function
  - 1. Receives data from input devices
  - 2. Stores information until it is needed
- B. Two types of memory
  - 1. Read-only memory (ROM)--permanent, unchangeable memory which stores the programs prepared by the manufacturer. Several types of ROM are available on the market today.

2. Random access memory (RAM)--changeable, reusable memory which is used to store the programs and data during a program execution. This memory is temporary and information is lost when the power is turned off.

IV. Input/Output system--the part of the computer which communicates with peripheral devices.

A. Controls communication between the computer and peripheral devices, such as a printer or cassette unit.

B. Enables peripheral devices to be interfaced or connected to the computer.

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 3--TERMINOLOGY

Directions: From the list below, write each term by the correct definition.

Read on Memory (ROM)
Random Access Memory (RAM)
Input/Output System
Arithmetic/logic Unit
Control Unit
Memory

________________1. Responsible for the automatic and decision-making characteristics of the computer.

________________2. Carries out most of the operations designated by the computer's instruction set.

________________3. Permanent, unchangeable memory.

________________4. That part of the computer where information is stored.

________________5. The "brains" of the computer.

________________6. That part of the computer which communicates with peripheral devices.

________________7. Changeable, reusable memory.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

INFORMATION SHEET 4--PERIPHERAL DEVICES

I. Terms and Definitions

A. Auxiliary storage--a secondary, external memory; information from the computer is stored for later use; information is stored in a form that cannot be read by the user.

B. CRT screen--cathode ray tube screen; a television-like screen which displays data.

C. Digitizer--a device interfaced with the computer to convert any shape, graph, chart, or map into digital information for the computer to use.

D. Hard copy--written, typed, or printed copy of data.

E. Magnetic disc drive unit--a device used to record information onto a magnetic disc and to send information to the computer's memory.

F. Magnetic floppy disc--a magnetic medium which resembles a phonograph record for recording information.

G. Magnetic hard disc--magnetic tape concealed in plastic on which data is recorded.

H. Magnetic tape unit--a device used to record information on magnetic tape and to send information to the computer's memory, once it has been recorded.

I. Mark-sense cards--data is recorded on cards with pencil marks. An optical reader is used to read the data from the cards into the computer's memory, or to send it on magnetic tape.

J. Microfilm--film which contains a photographic record of material reduced in size.

K. Microfilm reader--a device which enlarges microfilm so the viewer can read the reduced material.

L. OCR--optical character reader; a device which scans material for data and feeds the data into the computer's memory.

M. Peripheral devices--external devices attached and controlled by the computer.

N. Printer--a device which provides a hard copy of output data from the computer.

O. Punched card--a standard computer card which holds data. A keypunch machine is used to punch holes in the cards.

P. Punched-card reader--used to read and translate data from punched cards into an acceptable code for the computer.

Q. Punched-paper tape--a recording medium; a paper-tape punch is used to punch holes in the paper tape to represent data usable by the computer.

R. Punched-paper tape reader--a device used to read data from paper tape into the computer.

S. Soft copy--information stored on a magnetic medium or which appears on a CRT screen.

T. Speech synthesizer--a device which converts strings of characters into voice output.

U. Telephone modem--a device designed to connect the computer to a communication line; it converts digital data from the computer to analog (sound) waves which can be transmitted over the communication line. At the receiving end, another modem converts the analog data into digital signals for the computer.

V. Terminal--a device used to communicate with a computer; consists of a keyboard and CRT screen, and sometimes a hard copy printer.

II. Peripheral Devices

A. Function

1. To link the computer to the outside world.

2. To enable the user to communicate with the computer.

B. Types of Peripheral Equipment

1. Primary devices--used to input information into the computer and to output information in a usable form

2. Secondary devices--used to receive information into the computer, store it, and return the information to the computer. The stored information is usually not in a user-readable form.

III. Primary Devices

(NOTE: The type and number of peripheral devices that a computer can support depend on the size and the capabilities of the computer.)

A. Input devices

1. Function

a. To provide a means of communication between the user and the computer.

b. To get information, programs, and instructions into the computer's memory.

c. To convert data from a form the user can interpret into a form the computer can process.

2. Types of input devices

   a. Direct input--the user communicates directly with the computer; sometimes referred to as online.

      (1) keyboard/terminal

      (2) special device, such as a telephone

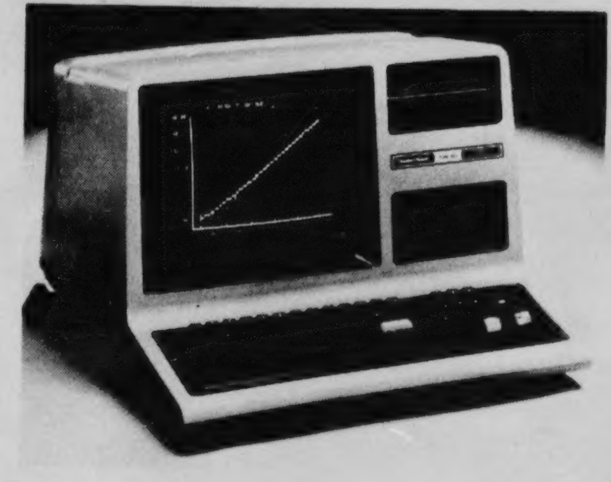


PHOTO COURTESY OF RADIO SHACK

PHOTO COURTESY OF DEST DATA CORP.

   b. Indirect input--data is first recorded on an input medium and then a device is used to read the data from the medium into the computer's memory.

      (1) punched-card reader

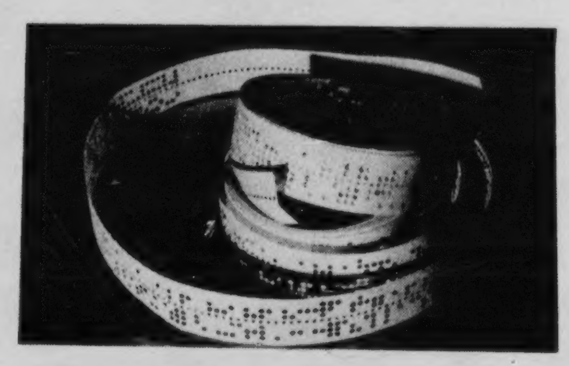
      (2) paper-tape reader

      (3) magnetic tape unit

      (4) magnetic disc drive unit

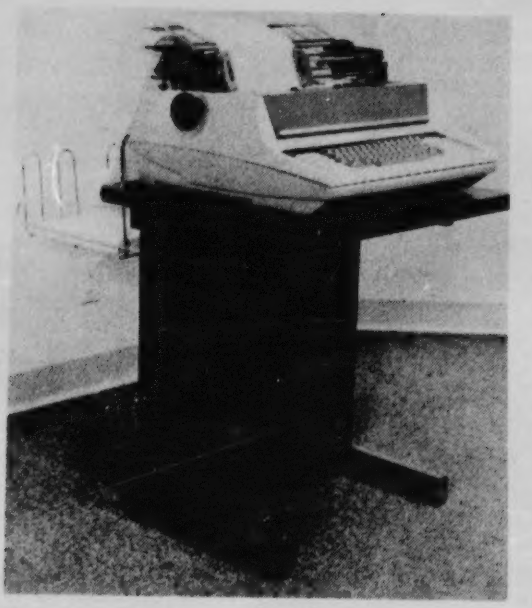
      (5) optical character reader (OCR)

3. Types of input media
    a. Paper tape
    b. Punched cards
    c. Mark-sense cards
    d. Magnetic tape cassettes
    e. Magnetic discs



B. Output Devices

1. Function
    a. To provide a means of communication from the computer's memory to the outside world.
    b. To provide data in a form that is immediately usable.
2. Types of output devices
    a. Automatic typewriters
    b. Printers
    c. CRT screen
    d. Magnetic tape unit
    e. Magnetic disc drive unit
    f. Microfilm reader



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3. Types of output media

   a. Hard copy

   b. Soft copy

   c. Punched cards

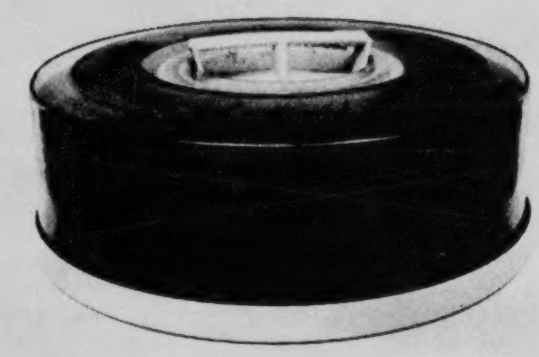
   d. Paper tape

   e. Magnetic tape cassette

   f. Magnetic disc

   g. Microfilm

   h. Optical mark reader



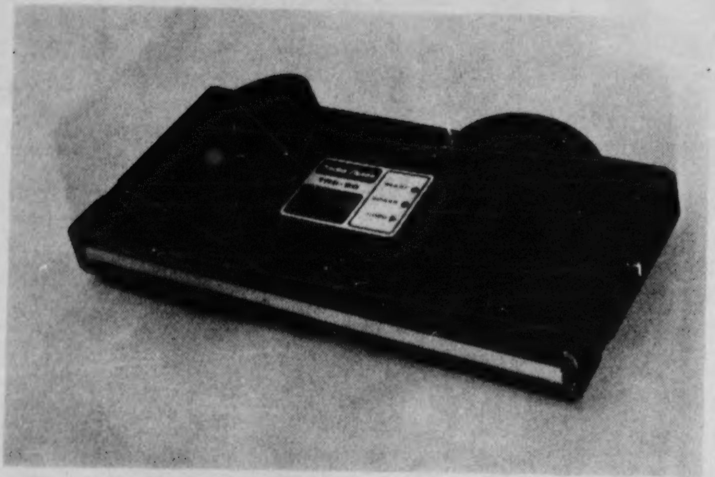
C. Miscellaneous Peripheral Devices

Other types of peripheral devices available are:

1. Telephone modem

2. Speech synthesizer

3. Digitizers



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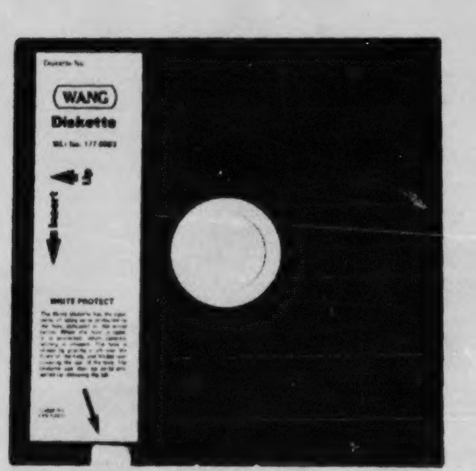
III. Secondary devices--Auxiliary Storage

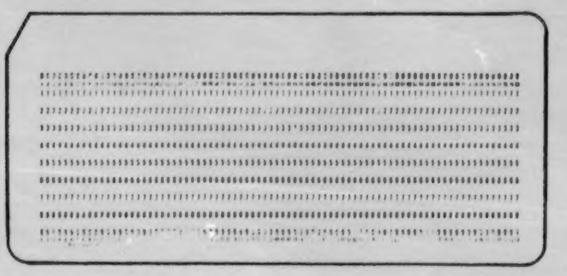
A. Function

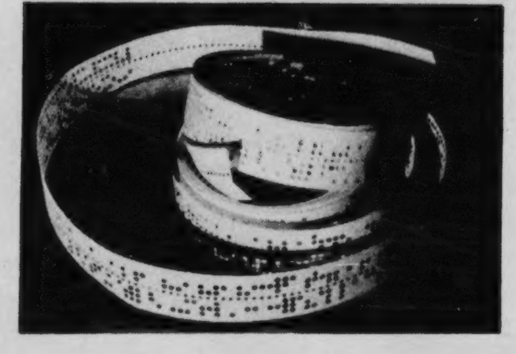
1. To store large volumes of programs and data not currently being used by the computer.
2. For permanent storage outside the computer of information generated by the computer.
3. To enable data to be transported from one computer to another.

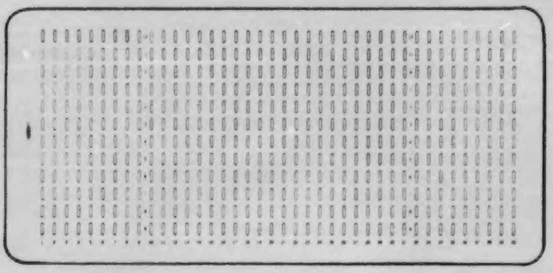
B. Types of auxiliary storage

1. Paper tape
2. Punched cards
3. Magnetic tape cassettes and reels
4. Magnetic disc
5. Microfilm









CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 4--TERMINOLOGY

DIRECTIONS: Match each of the terms to its correct definition by writing the appropriate letter in the blanks provided.

_____ 1. A secondary, external memory used to store information.

_____ 2. A recording medium; information is punched/recorded on tape made of paper.

_____ 3. Written, typed, or printed copy of data.

_____ 4. A device used to read data from paper tape into the computer.

_____ 5. A standard computer card which holds data.

_____ 6. Provides the user with a means of communication with the computer.

_____ 7. A device used to record information onto a magnetic disc.

_____ 8. A device which provides a hard copy of output data.

_____ 9. Information stored on a magnetic medium or which appears on a CRT screen.

_____10. A device used to record information on magnetic tape.

_____11. A large, round magnetic tape concealed in plastic on which data is recorded.

_____12. The user communicates directly with the computer.

_____13. A television-like screen which displays data.

_____14. A device used to read and translate data from punched cards.

_____15. Provide a means of communication from the computer's memory to the outside world.

_____16. A device which converts strings of characters into a voice output.

_____17. A magnetic medium which resembles a phonograph record.

_____18. A device which scans material for data and feeds the data into the computer.

_____19. A device used to communicate with a computer; consists of a keyboard and CRT screen.

_____20. External devices.

_____21. A device which converts any shape, graph, chart, or map into digital information for the computer use.

_____22. A device which enlarges microfilm for the viewer.

a. Auxiliary storage
b. CRT screen
c. Digitizer
d. Hard copy
e. Magnetic floppy disc
f. Magnetic disc drive unit
g. Magnetic tape unit
h. OCR
i. Microfilm reader
j. Peripheral devices
k. Printer
l. Punched card
m. Punched-card reader
n. Punched-paper tape
o. Output devices
p. Punched-paper tape reader
q. Soft copy
r. Direct input
s. Terminal
t. Speech synthesizer
u. Input devices
v. Magnetic hard disc

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 5--PERIPHERAL DEVICES

DIRECTIONS: From the list below, write each term under the appropriate category for peripheral devices with which it is normally associated. Some of the terms may be found in more than one category.)

Punched-card reader
Printers
Hardcopy
Magnetic disc
Terminal
CRT screen
Digitizer
Paper-tape reader
Magnetic cassette
Speech synthesizer
OCR
Paper tape
Automatic typewriter
Mark-sense cards
Telephone modem
Magnetic tape unit
Microfilm reader
Soft copy
Magnetic disc drive unit
Microfilm
Punched cards

INPUT DEVICES

INPUT MEDIA

OUTPUT DEVICES

OUTPUT MEDIA

MISCELLANEOUS DEVICES

AUXILIARY STORAGE

UNIT IV

CONCEPTS AND THEORIES OF MICTOCOMPUTERS

INFORMATION SHEET 5--COMPUTER LANGUAGES AND SOFTWARE

I. Terms and Definitions

A. CAI--computer assisted instruction.

B. Courseware--programs written for use in educational instruction.

C. Firmware--programs and data stored permanently in the computer's memory during the manufacturing process.

D. Mnemonics--symbolic abbreviations used in programming such as A can stand for add; L can stand for load; TRNS can stand for transfer.

E. Program--the set of instructions that tells a computer how to perform a specific job.

F. Programmer--the person who writes the programs.

G. Programming--the task of preparing the set of instructions.

H. System--a set of programs concerned with the operation of a computer.

I. User programmable--the user can write his/her own applications programs for the computer.

J. Software--computer programs.

II. Computer Languages

The computer operates under or is controlled by the direction of a program. The sequence of steps to be performed must be translated into detailed instructions the computer understands. Therefore, the programs must be written in a programming (computer) language understood by the computer being used.

A. Types of programming languages

A computer may accept one or all of the following languages:

1. Machine language--the final language used by all computers; is in binary numbers and codes, and requires the programmer to have a working knowledge of the computer's internal components and operations. This language is difficult to learn, time-consuming, and costly.

2. Assembly language--a symbolic language which uses symbols or mnemonics to code instructions. It is easier to learn than machine language.

3. High-level languages--those languages that are at a higher level and closer to English than the assembly language. These languages are easier to learn and do not require the programmer to have a working knowledge of the computer's internal components or its operations. The following are types of high-level languages:

   a. BASIC (Beginner's All-purpose Symbolic Instruction Code)--a general-purpose language for beginners. There are many versions of BASIC.

   b. FORTRAN (Formula Translator)--used primarily for solving scientific, engineering, and mathematical problems.

   c. COBOL (Common Business-Oriented Language)--used primarily to solve business-related problems, such as accounting, inventory control, etc.

   d. Pascal (named for Blaise Pascal who invented the first mechanical adding machine)--a language which enables the computer to describe data as powerfully as it can process data. It requires less memory, is easy to learn, and executes faster than the other languages.

   e. RPG (Report Program Generator)--a special-purpose language for processing data to generate and print reports.

   f. PL/I (Programming Language I)--a language which can be used for both scientific and business applications; combines COBOL and FORTRAN plus some new commands not contained in either.

   g. APL (A Programming Language)--a special purpose language.

III. Software

Software is a set of programs or routines concerned with the operation of a computer system. The programs control the operation of the computer. The two categories of software are:

A. System Software

1. Function--to aid in the development of system and applications software to control the execution of software in the computer.

2. Types of system software

   a. Language translators

   For a computer to accept programs not written in machine language, these programs must be translated before the computer can begin execution of the program. One of the following translator programs may be written or purchased and used:

(1) Assembler--a program which translates assembly language programs into machine language instructions. Once a program has been written in assembly language, it is entered into the computer whose memory contains an assembler. The assembler converts the program into machine language for execution.

(2) Compiler--a higher level translation program which resides in the memory to convert programs written in a high-level language into machine language.

(3) Interpreter--another form of a higher level translation program. It analyzes the high-level language program and converts it into machine language for execution.

b. Operating system--a set of system programs that can perform many different services the user would normally have to program if such a system were not available.

B. Applications Software

1. Software required by the computer for it to do useful work. (Payroll, accounts receivable, games, word processing).

2. A program or set of programs that perform the functions specified by the user, such as sorting lists, performing calculations, or entering data onto forms.

C. Software Development and Sources

Programs are necessary to control the operations of the computer and to feed data into the computer. There are several alternatives available for providing these programs to operate a computer system:

1. In-house development--a person who is knowledgeable in programming languages, internal components, and operations of the computer can write the programs needed to operate the computer.

2. Off-the-shelf packages--programs already developed which are available from various sources.

   a. Computer manufacturers--software provided by the manufacturers of computer systems.

   b. Systems houses--companies which provide all the software for a particular computer.

   c. Software houses--firms that specialize in the development of software.

   d. Other users--software developed by users for their own computers sell the software to help recover the cost of developing the software.

   e. Contracted development--person(s) or firm(s) who are hired by the user to develop specific software.

d. Other users--software developed by users for their own computers sell the software to help recover the cost of developing the software.

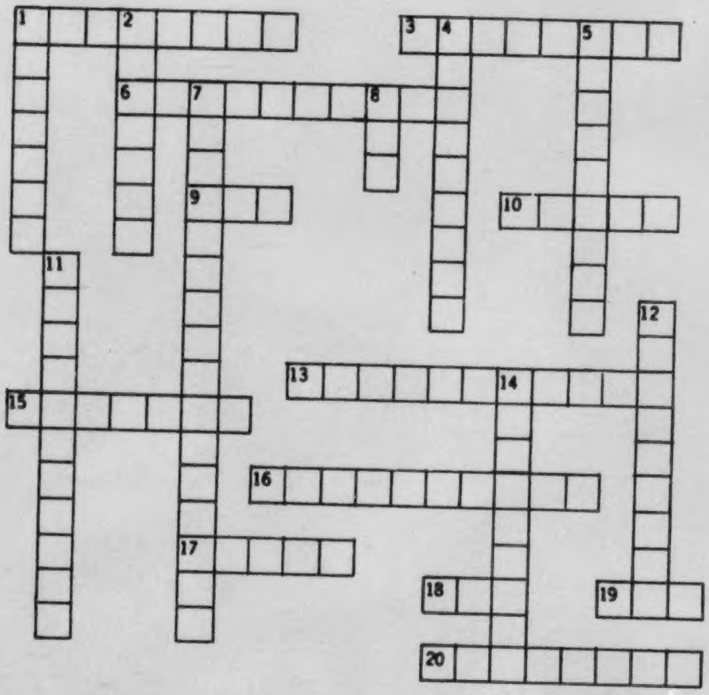
e. Contracted development--person(s) or firm(s) who are hired by the user to develop specific software.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 6--TERMINOLOGY

DIRECTIONS: Fill in the correct terms in the crossword puzzle.



ACROSS

1. Programs and data stored permanently in the computer's memory.
3. A set of programs concerned with the operation of a computer.
6. Programs written for use in educational instruction.
9. Abbreviation for Report Program Generator.
10. Abbreviation for Common Business-Oriented Language.
13. The task of preparing the set of instructions or programs.
15. The set of instructions that tell the computer how to perform a specific job.
16. The person who writes the programs.
17. Abbreviation for Beginner's All-Purpose Symbolic Instruction Code.
18. Abbreviation for Computer Assisted Instruction.
19. Abbreviation for Programming Language I.
20. A symbolic language which uses symbols or memories to code instructions.

DOWN

1. Abbreviation for Formula Translator.
2. The final language used by all computers.
4. A set of system programs that can perform many different services the user would normally have to program.
5. A program which translates assembly language programs into machine language instructions.
7. The user can write his/her own applications programs for the computer.
8. Abbreviation for A Programming Language.
11. A translator which analyzes and converts the high-level language into machine language.
12. Those languages that are closer to English than the assembly language.
14. Symbolic abbreviations used in programming.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

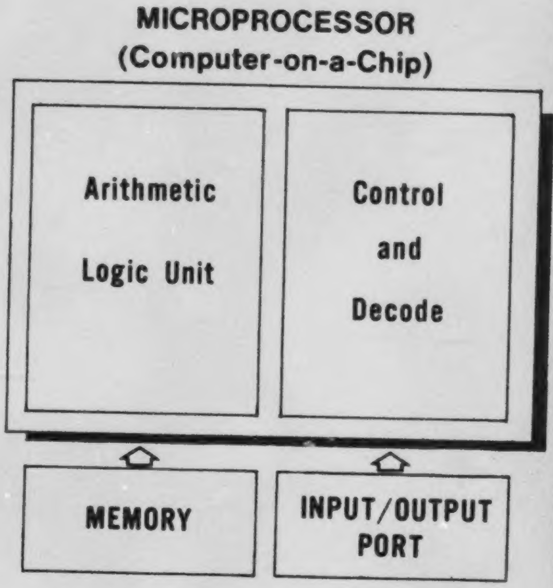
INFORMATION SHEET 6--MICROCOMPUTER

I. Parts of a Microcomputer

   A. Central Processing Unit

      1. The "brains" of the microcomputer is a microprocessor on a "chip".

      2. It contains both the control unit and the arithmetic/logic unit.


MICROPROCESSOR
(Computer-on-a-Chip)
Arithmetic Logic Unit
Control and Decode
MEMORY
INPUT/OUTPUT PORT

   B. Memory

      1. Two types of memory common to all microcomputers are:

         a. RAM (random access memory)

            (1) a changeable, reusable memory

            (2) used during a program execution to store the program and data needed.

            (3) information contained in RAM is lost when the power is turned off.

         b. ROM (read only memory)

            (1) a permanent, unchangeable memory.

            (2) used to store firmware.

            (3) information is not lost when the power is turned off.

            (4) two types of ROM now available on some microcomputers are:

(a) PROM (programmable ROM)--this type of memory can be programmed only once which allows the user to program the ROMs themselves.

(b) EPROM (erasable ROM)--this type of memory can be erased and rewritten on a special machine a number of times.

2. Memory Capacity

a. Memory capacity for both ROM and RAM vary with each model of microcomputer.

b. Memory capacity ranges from 4K to 64K.

c. Memory can usually be expanded by adding additional memory "chips" or memory circuit boards.

II. Peripheral Devices

A. Input Devices and Media

The following devices and media are used to input data and programs into the microcomputer:

1. Keyboard/terminal

2. Magnetic tape unit with cassettes

3. Magnetic disc drive unit with floppy disc.

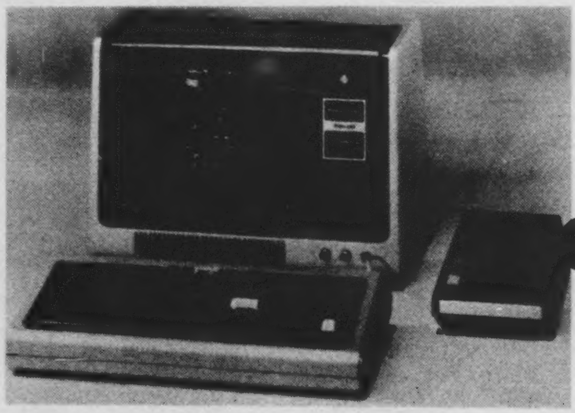


PHOTO COURTESY OF RADIO SHACK

PHOTO COURTESY OF RADIO SHACK

B. Output Devices and Media

Output devices used with a microcomputer are:

1. CRT screen for soft copy

2. Printer for hard copy

3. Magnetic tape unit with cassettes

4. Magnetic disc drive unit with floppy discs

C. Auxiliary Storage

The most commonly used methods of auxiliary storage for a microcomputer are:

1. Magnetic cassette tape

2. Magnetic floppy disc

Radio Shack
TRS-80

PHOTO COURTESY OF RADIO SHACK

D. Miscellaneous Peripheral Devices

The following devices are available for use with a microcomputer that has the appropriate interface capabilities:

1. Telephone modem

2. Speech synthesizer

3. Digitizer

III. Computer Languages and Software

A. Programming Languages

The most commonly used languages for a microcomputer are:

1. BASIC and variations of BASIC

2. PASCAL

3. FORTRAN

B. Software

Both system and applications software are used on microcomputers. The software may be written by a programmer/user or purchased from various sources by the user.

1. System software

    a. Language translators and operating system software are used on microcomputers.

    b. Interpreters are common to microcomputers but some microcomputers are available with compilers and assemblers. Many times the program translators are permanently stored in ROM during the manufacturing process.

2. Applications software

    a. Different applications may be used by the microcomputer.

    b. Applications programs may be written or purchased by the user in the desired language.

IV. Advantages and Disadvantages of Microcomputers

A. Advantages

1. Easy to install and operate.

2. Can be used by a person without data processing or programming experience.

3. Programming a microcomputer is relatively easy.

4. Makes computer capabilities available to more people at an affordable cost.

5. Suitable for a particular application.

6. Has greater graphic capabilities than some larger computers.

B. Disadvantages

1. Slower in processing large quantities of data.

2. Limited

    a. Memory capacity.
    b. In the number of programming languages accepted.
    c. In the number of programs and data the memory can hold at one time.
    d. In applications.
    e. In time-sharing capabilities.

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ACTIVITY SHEET 7--EQUIPMENT COMPONENTS

DIRECTIONS: Identify the basic components of a microcomputer for each of the following categories.

CENTRAL PROCESSING UNIT	MEMORY

INPUT DEVICES	INPUT MEDIA

OUTPUT DEVICES	OUTPUT MEDIA

AUXILIARY STORAGE

MISCELLANEOUS PERIPHERAL DEVICES

PROGRAMMING LANGUAGES

SOFTWARE

UNIT IV

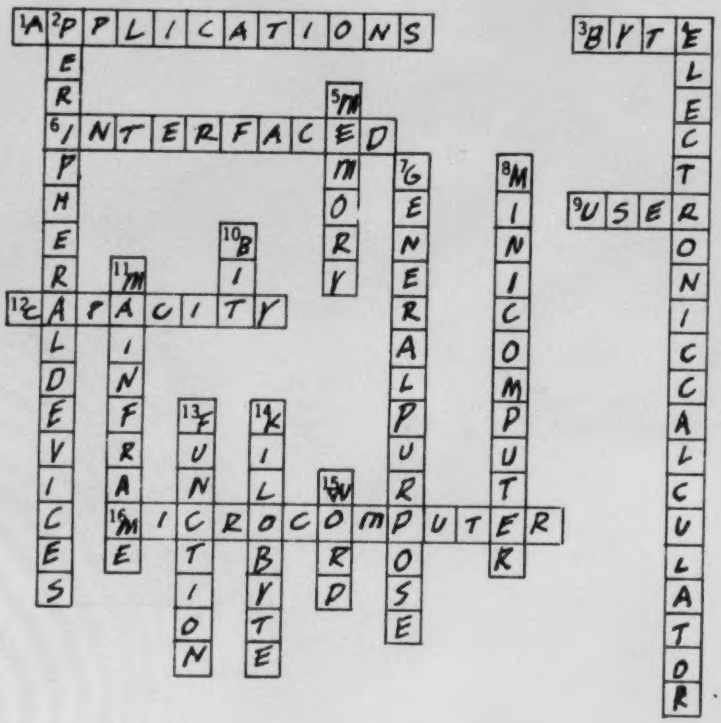
CONCEPTS AND THEORIES OF MICROCOMPUTERS

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

Evaluated to the satisfaction of the instructor.

Activity Sheet 2


1 APPLICATIONS
2 PERIPHERAL DEVICES
3 BYTE
4 ELECTRONIC CALCULATOR
5 MEMORY
6 INTERFACED
7 GENERAL PURPOSE
8 MINICOMPUTER
9 USER
10 BIT
11 MAINFRAME
12 CAPACITY
13 FUNCTION
14 KILOBYTE
15 WORD
16 MICROCOMPUTER

Activity Sheet 3

1. Control unit
2. ALU
3. ROM
4. Memory
5. CPU
6. I/O system
7. RAM

Activity Sheet 4

1. a
2. n
3. d
4. p
5. l
6. u
7. f
8. k
9. q
10. g
11. v
12. r
13. b
14. m
15. o
16. t
17. e
18. h
19. s
20. j
21. c
22. i

Activity Sheet 5

INPUT DEVICES

Punched-card reader
Terminal
Paper-tape reader
Magnetic tape unit
Magnetic disc drive unit
OCR

INPUT MEDIA

Paper tape
Punched cards
Mark-sense cards
Magnetic tape cassettes
Magnetic disc

OUTPUT DEVICES

Automatic typewriters
Printers
CRT screen
Magnetic tape unit
Magnetic disc drive unit
Microfilm reader

OUTPUT MEDIA

Hard copy
Soft copy
Punched cards
Paper tape
Magentic tape
Magnetic disc
Microfilm

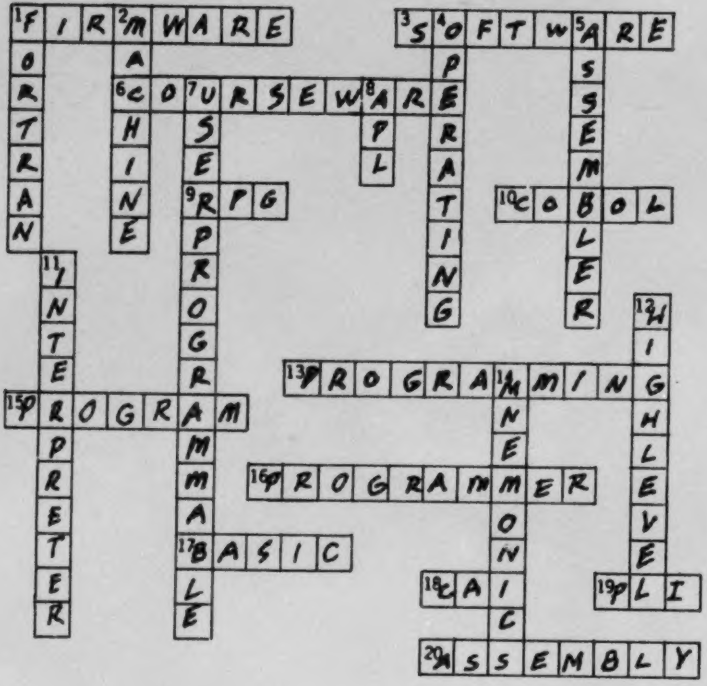
MISCELLANEOUS

Telephone modem
Speech synthesizer
Digitizers

AUXILIARY STORAGE

Paper tape
Punched cards
Magnetic tape cassette
Magnetic disc
Microfilm

Activity Sheet 6


1 FIRMWARE
1 FORTRAN
2 MACHINE
3 SOFTWARE
4 OPERATING
5 ASSEMBLER
6 COURSEWARE
7 USER PROGRAMMABLE
8 APL
9 RPG
10 COBOL
11 INTERPRETER
12 HIGH LEVEL
13 PROGRAMMING
14 MNEMONIC
15 PROGRAM
16 PROGRAMMER
17 BASIC
18 CAI
19 PLI
20 ASSEMBLY

Activity Sheet 7

CENTRAL PROCESSING UNIT

Microprocessor with control unit and arithmetic/logic unit

INPUT DEVICES

Keyboard/terminal

Printer

Magnetic tape unit

Magnetic disc drive unit

AUXILIARY STORAGE

Magnetic cassette tape

Magnetic floppy discs

PROGRAMMING LANGUAGE

BASIC

FORTRAN

PASCAL

MEMORY

ROM PROM

RAM EPROM

INPUT MEDIA

Soft copy

Hard copy

Cassettes

Floppy discs

MISCELLANEOUS PERIPHERAL DEVICES

Telephone modem

Speech synthesizer

Digitizer

Software

System software

Applications software

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

UNIT TEST

A. Write the letter of the response that correctly completes the following statements.

_____1. An example of personal applications for a microcomputer is

(a) data processing
(b) budgeting
(c) form letters

_____2. A microcomputer is

(a) very expensive
(b) large and bulky
(c) easy to use

_____3. Electronic mail is an example of _________ applications.

(a) personal
(b) business
(c) entertainment

_____4. Microcomputers are used in the classroom to

(a) improve instruction
(b) replace the teacher
(c) replace books

_____5. A microcomputer is a tiny computer composed of

(a) vacumns
(b) fiber optics
(c) integrated circuit chips

B. Match the following terms associated with computers to the correct definition by placing the letter in the correct space.

_____1. That part of the computer which stores programs and data.

_____2. The person operating the computer.

_____3. A machine that can perform many kinds of jobs.

_____4. Different uses or functions a computer can perform.

_____5. Another term for byte.

_____6. Linked or joined together.

_____7. A series of bits.

_____8. The size of memory available.

_____9. The contraction for binary digit.

____10. External equipment.

____11. A measure of the memory capacity for a computer.

a. Applications

b. Bit

c. Byte

d. General-purpose computer

e. Interfaced

f. Kilobyte

g. Memory

h. Memory capacity

i. Peripheral devices

j. User

k. Word

C. Identify the characteristics for each of the four computers by placing

E for electronic calculator
Micro for microcomputer
Mini for minicomputer
Main for mainframe computer

in the correct space.

_____1. Limited in volume of data processed.

_____2. Largest and most powerful, computer available.

_____3. Simplest type of computer.

_____4. Costs range from $5,000 to $400,000.

_____5. Used to perform specific applications.

_____6. Has limited peripheral support.

_____7. Memory can be expanded to millions of words.

_____8. Low in cost.

_____9. Most expensive computer available.

____10. Cost range from $300 to $5,000.

D. Match the following terms associated with computers to the correct definition by placing the letter in the correct space.

______ 1. Changeable, reusable memory.

______ 2. Arithmetic/logic unit.

______ 3. Performs calculations and makes decisions.

______ 4. That part of the computer which controls communications between the computer and peripheral devices.

______ 5. Read Only Memory

______ 6. Central Processing Unit

______ 7. The "brains of the computer.

______ 8. Random Access Memory

______ 9. Stores information until it is needed.

______10. Permanent, unchangeable memory.

a. CPU

b. Memory

c. RAM

d. ROM

e. Random Access Memory

f. Central Procesisng Unit

g. Read Only Memory

h. ALU

i. Input/Output system

j. Arithmetic/logic Unit

E. Write the letter of the response that correctly completes the following statements.

______ 1. A device which provides a hard copy is

(a) a disc
(b) an OCR
(c) a printer

______ 2. A device used to record information onto a disc is

(a) a magnetic disc drive unit
(b) a punched-card reader
(c) a magnetic tape unit

______ 3. A keyboard/terminal is an example of

(a) output media
(b) auxiliary storage
(c) direct input

______ 4. A CRT screen is

(a) an input device
(b) output device
(c) storage device

_____ 5. An input device is used

(a) to get information into a computer's memory
(b) to communicate with the user
(c) to provide output

_____ 6. Written, typed, or printed copy of data is called

(a) Soft copy
(b) Magnetic tape
(c) Hard copy

_____ 7. Soft copy is information

(a) stored on a magnetic medium
(b) displayed on a CRT screen
(c) both a and b

_____ 8. A telephone modem is

(a) an auxiliary storage device
(b) a device designed to connect the computer to a communication line
(c) none of the above

_____ 9. A punched-card reader is an example of

(a) indirect input
(b) auxiliary storage media
(c) direct input

_____10. Auxiliary storage is considered

(a) primary peripheral devices
(b) direct input
(c) secondary devices

F. List the three types of programming languages that a computer may accept.

1.

2.

3.

G. Indicate whether the following statements are TRUE or FALSE by circling T or F.

T F 1. Machine language is the final language used by all computers.

T F 2. A program is a set of instructions that tells a computer how to perform a specific job.

T F 3. Assembly language is a higher level language closer to English.

T F 4. A program must be written in a programming language understood by the computer.

T F 5. COBOL and assembly are high-level languages.

T F 6. FORTRAN stands for Formula Transaction.

T F 7. RPG is a language used mainly for processing data to generate and print reports.

T F 8. A compiler is used to convert assembly language programs into machine language instructions.

T F 9. Applications software are required by the computer for it to do useful work.

T F 10. Software houses develop software for a particular computer.

H. Write the letter of the response that correctly completes the following statements.

_____1. The CPU of a microcomputer is

(a) a mainframe
(b) a minicomputer
(c) a microprocessor
(d) an electronic calculator

_____2. The memory of a microcomputer is

(a) Machine language
(b) RAM and ROM
(c) ROM only
(d) RAM only

_____3. EPROM means

(a) easy PROM
(b) erasable PROM
(c) empty PROM
(d) none of the above

_____ 4. An input device for a microcomputer is

(a) a keyboard/terminal
(b) magnetic tape unit
(c) a paper tape reader
(d) both a and b

_____ 5. Input media for a microcomputer are

(a) paper tape
(b) magnetic cassettes and discs
(c) punched card
(d) microfilm

_____ 6. Output devices for a microcomputer are

(a) a CRT screen
(b) a punched paper tape
(c) a printer
(d) both a and c

_____ 7. Auxiliary storage commonly used with a microcomputer are

(a) cassette tape or floppy disc
(b) microfilm
(c) punched cards
(d) both a and b

_____ 8. A language commonly used with a microcomputer is

(a) COBOL
(b) BASIC
(c) Assembly
(d) none of the above

_____ 9. Software available for a microcomputer are

(a) System software
(b) Applications software
(c) both a and b
(d) none of the above

_____10. Advantages of a microcomputer are

(a) a large memory capacity
(b) easy to operate and to install
(c) easy to program
(d) both b and c

UNIT IV

CONCEPTS AND THEORIES OF MICROCOMPUTERS

ANSWERS TO UNIT TEST

A.
1. b
2. c
3. b
4. a
5. c

B.
1. g
2. j
3. d
4. a
5. k
6. e
7. c
8. h
9. b
10. i
11. f

C.
1. Micro
2. Main
3. E
4. Mini
5. Micro
6. E
7. Main
8. E
9. Main
10. Micro

D.
1. e
2. h
3. j
4. i
5. d
6. a
7. f
8. c
9. b
10. g

E.
1. c
2. a
3. c
4. b
5. a
6. c
7. c
8. b
9. a
10. c

F.
1. Machine language
2. Assembly language
3. High-level language

G.
1. T
2. T
3. F
4. T
5. F
6. F
7. T
8. F
9. T
10. F

H.
1. c
2. b
3. b
4. d
5. b
6. d
7. a
8. b
9. c
10. d

UNIT V

LANGUAGE USAGE

UNIT OBJECTIVE

After completion of this unit, the student will be able to identify and apply correct language usage skills in business correspondence. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Match terms associated with the six parts of speech to their definitions.
2. List the six basic classifications for the parts of speech.
3. Match terms associated with spelling rules to their definitions.
4. Apply spelling rules.
5. Match terms associated with the use of punctuation marks to their definitions.
6. List the seven purposes of punctuation marks.
7. Identify the correct use of various punctuation marks.
8. Identify rules for capitalization.
9. Identify rules for the expression of numbers.
10. List the four rules for using abbreviations.
11. Identify rules for abbreviations.
12. Match terms associated with writing sentences to their definitions.
13. List the four tips for writing sentences.
14. Name the two types of clauses.
15. List the three types of sentences.
16. Identify rules for writing sentences.

17. Demonstrate the ability to:

    a. Select verbs
    b. Select nouns and pronouns
    c. Select pronouns
    d. Select personal pronouns
    e. Select adjectives and adverbs
    f. Select prepositions
    g. Correctly spell words
    h. Correctly insert punctuation marks
    i. Capitalize words correctly
    j. Express numbers in correct form
    k. Apply rules for using abbreviations
    l. Write correct sentences

UNIT V

LANGUAGE USAGE

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

   A. Preview the unit. Gather any resources and references to provide additional information to supplement the unit.

   B. Administer pretest to determine the areas in which students experience the greatest number of problems.

      1. Use pretest provided in the General Clerical Publications, Unit I; use tests available from other publishers; or develop your own pretests.

      2. Select information sheets and activity sheets for students to complete based on the results of the pretests.

   C. Obtain the audiovisual series, "Developing and Improving Written Communication," from the Occupational Curriculum Laboratory to use as an instructional aid with this unit.

      1. Preview each presentation and determine how it will be used with the unit.

      2. Choose a point in the lesson where the presentations will have the greatest impact.

      3. Duplicate the appropriate activities that are provided with the audiovisuals to provide students with the additional practice needed to attain the objectives.

   D. Arrange for an employer and/or secretary to speak to the class on the importance of developing good language usage skills and how these skills are used on the job.

   E. Give a five-minute written spelling test at the beginning or end of every class period.

   F. Encourage students to watch for language usage errors in everything they read and to listen as others speak to raise their awareness of correct usage.

II. Objective Sheet

   A. Discuss the unit and specific objectives.

   B. Add objectives for any information added to the unit.

III. Information and Activity Sheets

A. Information Sheet 1--GRAMMAR

1. Discuss the six basic classifications for parts of speech.
2. Provide additional examples if necessary to clarify the discussion.
3. Have the students complete the following activities.
    - a. Activity Sheet 1--IDENTIFYING VERBS
    - b. Activity Sheet 2--IDENTIFYING NOUNS AND PRONOUNS
    - c. Activity Sheet 3--IDENTIFYING PRONOUNS
    - d. Activity Sheet 4--CHOOSING PERSONAL PRONOUNS
    - e. Activity Sheet 5--IDENTIFYING ADJECTIVES AND ADVERBS
    - f. Activity Sheet 6--IDENTIFYING PREPOSITIONS

B. Information Sheet 2--SPELLING

1. Discuss the terms and definitions. Provide additional examples if necessary.
2. Discuss the spelling tips and suggestions.
3. Discuss the spelling rules listed.
    - a. Add additional rules if necessary.
    - b. Provide examples as each rule is discussed.
4. Have students complete the Activity Sheets 7 through 11 which cover the rules studied.

C. Information Sheet 3--PUNCTUATION

1. Discuss the terms and definitions.
2. Discuss the uses and purposes of punctuation marks.
3. Discuss the rules for punctuation provided in the information sheet.
    - a. Use examples provided to facilitate the discussion.
    - b. Add rules for punctuation marks that need to be presented but are not covered in this unit.
4. Have students complete Activity Sheets 12, 13, and 14 which cover the rules discussed.

D. Information Sheet 4--CAPITALIZATION AND EXPRESSION OF NUMBERS

1. Discuss the rules for capitalization.
2. Have students complete Activity Sheets 15 and 16.
3. Discuss the rules for the expression of numbers.
4. Have students complete Activity Sheet 17.

E. Information Sheet 5--ABBREVIATIONS

1. Discuss the rules for abbreviating personal names.
2. Discuss the miscellaneous rules for abbreviating.
3. Have students complete Activity Sheet 18.

F. Information Sheet 6--WRITING SENTENCES

1. Discuss the terms and definitions.
2. Discuss the types of clauses.
    a. Emphasize the differences in each type of clause.
    b. Provide examples to clarify the discussion.
3. Discuss the different types of sentences.
4. Discuss the rules and tips to follow when writing sentences.
    a. Provide examples to facilitate the discussion.
    b. Obtain and make overhead projection transparencies of copies of actual business letters that illustrate the application of these rules.
5. Have students complete the following activities.
    a. Activity Sheet 19--IDENTIFYING SUBJECTS AND VERBS.
    b. Activity Sheet 20--SELECTING VERBS
    c. Activity Sheet 21--WRITING SENTENCES

IV. Answers to Activity Sheets

A. Answers are provided for all activities.

B. Provide answers for any activities added to the unit.

V. Unit Test

A. The test is divided into six parts.

1. Each part covers one information sheet.

2. Each part has various types of test questions.

B. Various approaches may be used in testing.

1. Give each part upon completion of the corresponding information sheet.

2. Administer the test upon completion of the entire unit.

3. Use tests as daily quizzes.

4. Use tests as activity sheets.

C. Add test parts corresponding to any information added to the unit.

VI. Answers to Unit Test

A. Answers are provided.

B. Prepare answers for any test parts added to the test.

VII. Resources and References

A. ENGLISH FUNDAMENTALS
Emery, Kierzek, and Lindblom
MacMillan Publishing Company
866 Third Avenue
New York, NY 10022

B. BUSINESS SPELLING AND WORD POWER
A. H. Lass
Bobbs-Merrill Educational Publishing
4300 W. 62nd Street
Indianapolis, IN 46268

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UNIT V

LANGUAGE USAGE

INFORMATION SHEET 1--GRAMMAR

I. Introduction

A. Grammar means, simply, the correct use of words in sentences.

B. Grammar, which deals with how the parts of speech function in a sentence, can be defined as the "science of language."

C. The word grammar comes from the Greek word gramma, which means letter, or written symbol.

D. Through correct use of grammar, a person can give to another person the clear meaning of the message intended.

E. Because writing cannot contain gestures and voice inflections or tone changes to help convey meaning, correct use of words is necessary.

II. Parts of Speech

There are six basic classifications for parts of speech. The basic function of a word is determined by how it is used with other words in a sentence.

A. Verb

1. A word that expresses action, a state of being, or occurrence.

2. The verb is called the most important word in the sentence because it is the word that gives life and purpose to the other words.

3. Most verbs are action verbs, and even one verb can be a sentence.

EXAMPLE: Halt! (The subject you is understood.)

The copies flew out of the machine. (Action)

The copies are clear. (State of being)

B. Noun

1. A word that names something, such as a person, place, thing, quality, idea, or event.

2. Nouns are called naming words, which are next in importance to verbs in a sentence.

3. The four types of nouns are:

    a. Common nouns--the ordinary names of objects, human beings, animals, places, etc.

    EXAMPLES: book microcomputer student teacher

    b. Proper nouns--the names of particular persons, places, and things. These are always begun with a capital letter.

    EXAMPLES: Bible Minolta Charlie Mrs. Jones

    c. Abstract nouns--the names of conditions and qualities.

    EXAMPLES: Happiness warmth beauty bravery

    d. Collective nouns--the names of collections or groups of persons, animals, and things.

    EXAMPLES: team family class committee

4. Characteristics of nouns include these:

    a. Usually, nouns are preceded by such words as a, an, my, the, each, every, that, etc.

    EXAMPLE: The girl went to town.

    An apple is a fruit.

    b. Usually, nouns are found in set positions.

    (1) Before a verb

    EXAMPLE: A dog $\overset{V}{\text{barks}}$.

    (2) After a verb

    EXAMPLE: $\overset{V}{\text{Clean}}$ the machine.

    (3) After a preposition

    EXAMPLE: Going $\overset{P}{\text{to}}$ the circus

    c. Some nouns have characteristic endings which distinguish them from corresponding verbs or adjectives.

    EXAMPLE: al, tion, ment, ance, ism, ness

verb -	noun -
arrive	arrival
content	contentment
rely	reliance
soft	softness

C. Pronoun

1. A word that is used as a substitute for a noun.
2. Pro means "for"--thus pronoun.
3. The more commonly used pronouns are:
    a. Personal pronoun--a substitute for persons or things.

       EXAMPLES: I, me, you, he, she, it, we, they

    b. Possessive pronoun--a substitute for things that are possessed.

       EXAMPLES: mine, his, yours,
       theirs, etc.

    c. Interrogative pronoun--a pronoun that asks a question.

       EXAMPLES: who, whom, which, what

D. Adjective

1. A word that describes or limits (gives qualities to) a noun.

   EXAMPLES: a boat, American flag
   the girl

2. Adjectives answer such questions as which? what kind? how many?
3. Adjectives may
    a. Precede a noun.

       EXAMPLE: Mark is a tall boy. (N above boy)
       adj. adj.

    b. Follow a linking verb and modify the subject.

       EXAMPLE: He is tall.
       adj.

    c. Follow a noun.

       EXAMPLE: The teacher, calm and serene,
       adj. adj.
       began to lecture.

4. Many adjectives are formed by adding the suffix able; ible; al; ant, ent; ar; ary; ful; ic, ical; ish; ive; less; ous; or y to other words.

EXAMPLE: depend dependable
She is a dependable employee.

E. Adverb

1. A word that modifies or describes a verb, an adjective, or another adverb.

EXAMPLES: She is a very smart student.
adv. adj.

She types fast.
adv.

He talks very slowly.
adv. adv.

2. Adverbs answer such questions as how, when, and where.

3. Many adverbs end in ly.

EXAMPLES: slowly, carefully, quickly, etc.

4. Some frequently used adverbs are after, too, now, before, there, quite, etc.

F. Preposition

1. A word that introduces a phrase; a linking or connecting word.

EXAMPLE: She lives in a small town near Dallas.
p.

After lunch, I took a nap.
p.

2. Some frequently used prepositions are to, about, in, on, before, by, etc.

(NOTE: Refer to a grammar book for a more complete list.)

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 1--IDENTIFYING VERBS

DIRECTIONS: In the following sentences, underline the verbs.

1. I sold candy at the Halloween Carnival.
2. We walked to school this morning.
3. She typed the report.
4. I like to watch football games.
5. We initiated the new club members.
6. His parents bought a new typewriter for him.
7. I attended the conference in Atlanta.
8. Who prepared the report?
9. The binding is pretty.
10. The boat sank while they were water skiing.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 2--IDENTIFYING NOUNS AND PRONOUNS

DIRECTIONS: In each of the following sentences, underline the nouns once and the pronouns twice.

1. Did you enjoy the program?
2. Our new office equipment is functional and saves time.
3. She can type and transcribe dictation efficiently.
4. Our firm is hiring word processing specialists.
5. Because we have plenty of help, we can do the best job.
6. Christmas is near and the shops are full of people.
7. A number of applicants interviewed for the job.
8. Office machinery must have careful maintenance.
9. I am going to the game.
10. Actions always speak louder than words.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 3--IDENTIFYING PRONOUNS

Directions: Below are sentences in which the pronouns have been underlined. From the list at the right, identify each pronoun used in the sentence by type, and write the correct letter(s) in the space at the left.

a. Personal
b. Possessive
c. Interrogative

_____ 1. She typed my report.
_____ 2. Who is going in my place?
_____ 3. That workbook is yours.
_____ 4. Whom did you vote for in the last election?
_____ 5. That is mine.
_____ 6. We are protecting our rights.
_____ 7. What is the name of your doctor?
_____ 8. Which of the typewriters would you prefer?
_____ 9. The samples are yours to keep.
_____10. She is my cousin and his niece.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 4--CHOOSING PERSONAL PRONOUNS

DIRECTIONS: In each of the following sentences, underline the correct pronoun(s).

1. This is a secret between you and (I, me).
2. (Him, he) and (I, me) want to be word processing specialists.
3. The teacher chose Susan and (I, me) as class representatives.
4. (Us, we) girls expect to be cheerleaders.
5. Between you and (I, me), that teacher gives hard tests.
6. (Her, she) and (I, me) will have to help at the convention.
7. Can you go to the movies with Bill and (me, I)?
8. There was no one left at school except Ryan and (me, I).
9. Our teacher and (we, us) students are going on a field trip.
10. He asked Susan and (me, I) if we had completed the test.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 5--IDENTIFYING ADJECTIVES AND ADVERBS

DIRECTIONS: In each of the sentences below, underline the adjectives once and the adverbs twice.

1. He walked slowly to the tool house to get the new lawnmower.
2. Where is my blue skirt?
3. The chair has a shiny finish.
4. I have worked hard all day.
5. His latest record is a big hit.
6. She has done well in her new job.
7. We need your final paper.
8. These are very easy assignments.
9. The team made fewer points this year.
10. Sam is the fastest runner on the team.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 6--IDENTIFYING PREPOSITIONS

DIRECTIONS: Underline the prepositions in each of the following sentences.

1. Did you hear of his accident?
2. In regard to your order, the items will be mailed this week.
3. Tell me about your new car.
4. I plan to borrow the class notes from Charlie.
5. For many reasons, she was a lonely person.
6. Although we started late, we finished on time.
7. I haven't seen him since Wednesday.
8. The teacher took great interest in him.
9. They bought the white house with the blue shutters.
10. The room across the hall is empty.

UNIT V

LANGUAGE USAGE

INFORMATION SHEET 2--SPELLING

I. Terms and Definitions

A. Accent--The way a certain syllable is stressed in a word.

B. Consonant--A speech sound represented by any letter in the alphabet except a, e, i, o, u, and sometimes y.

C. Prefix--Something placed before.

EXAMPLE: social antisocial

D. Pronunciation--Putting the parts of written words into sounds; saying the word.

E. Suffix--Something placed after.

EXAMPLE: fault faultless

F. Syllable--A segment or part; the smallest unit of speech or writing.

G. Vowels--Speech sounds represented by a, e, i, o, u, and sometimes y.

II. Introduction

A. Correct spelling is necessary for clear communication.

B. Correct spelling helps avoid confusion and misunderstanding.

C. Correct spelling will save time by eliminating the need to correct spelling errors.

D. Correct spelling requires that you take the time to look up a word in a dictionary or word book when in doubt about how to spell it.

III. Spelling Tips and Suggestions

A. Learn to pronounce words correctly.

B. Learn to recognize when a word doesn't look right.

C. Use the dictionary to find words you cannot spell.

D. Use some sort of memory device to help you remember how a word is spelled.

E. Learn some simple rules for spelling.

F. Be careful about your spelling.

G. Make a list of commonly misspelled words to refer to when necessary. (See page 204.)

IV. Simple Spelling Rules

A. Words containing ie or ei.

1. You probably learned this rule in the fourth grade, but it's a good one to remember:

Write i before e
Except after c,
Or when sounded like a
As in neighbor and weigh.
Either, neither, leisure, seize are exceptions; watch for these.

EXAMPLES: achieve niece piece

2. Or "when the letter c you spy, place the e before the i."

(NOTE: These rules apply only when the pronunciation of ei or ie is a long e, as in he, or has the a sound, as in pale.)

EXAMPLES: deceive conceit perceive

3. ie is the usual spelling when followed by an r.

EXAMPLES: frontier pier fierce

B. Final y

1. When ending in y--preceded by a consonant--usually change the y to i before any suffix except one beginning with an i (ing, ish, ist).

EXAMPLE: copy copies copying

2. Words ending in y preceded by a vowel do not change the y to i.

EXAMPLE: convey conveying

C. Doubling final consonant

1. Double the consonant in a one-syllable word if it is preceded by a vowel and if the suffix begins with a vowel.

EXAMPLE: plan planning planned

2. Double the consonant in a two-syllable word when the accent is placed on the last syllable, and if it is preceded by a vowel and the suffix begins with a vowel.

EXAMPLE: refer referring referred

D. Final e

1. Usually, words ending in a silent e generally drop the e before a suffix beginning with a vowel.

   EXAMPLE: deprive depriving punctuate punctuating

2. Keep the e when adding a suffix beginning with a consonant.

   EXAMPLE: achieve achievement

3. Keep the silent e when the suffix "able" or "ous" are added to words ending with the soft sound of "ce" or "ge".

   EXAMPLE: manage manageable outrage outrageous

E. Add s or es

1. Add es when a word ends in s, ch, sh, or x.

EXAMPLES:	arch	arches
	brush	brushes
	process	processes

2. Add an s to some words ending in o; in others, add an es.

   (NOTE: When in doubt, check a dictionary.)

EXAMPLES:	bucko	buckoes
	coco	cocos
	ratio	ratios

3. Drop the y and add ies when words end in a consonant plus y.

EXAMPLES:	rarity	rarities
	proxy	proxies
	family	families

4. Add an s when words end in a vowel plus y.

EXAMPLES:	monkey	monkeys
	attorney	attorneys

Here is a list of some words that often are misspelled.

accommodate
acknowledgment
adviser
all right
bouillon
cafeteria
canister
category
diarrhea
embarrass
existence
fulfill
gauge
harass
hemorrhage
iridescent
irrelevent
judgment
liaison
lightning
liquefy
marshal
misspell
nickel
niece
parallel
paralleled
privilege
pronunciation
recommend
resistance
separate
sheriff
supersede
tranquillity
vacuum
weird

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 7--SPELLING

DIRECTIONS: Fill in the missing letters in the following words, using either ie or ei. Check your work, using a dictionary or word book.

1. n___ghbor
2. rec___e
3. rec___pt
4. l___n
5. br___f
6. effic___nt
7. l___sure
8. w___rd
9. th___f
10. sh___ld
11. l___utenant
12. n___ther
13. s___ze
14. n___ce
15. s___zure
16. dec___ve
17. for___gn
18. h___ght
19. gr___vous
20. s___ve

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 8--SPELLING

DIRECTIONS: Correctly spell each word below as it would appear after adding the endings shown.

1. lobby ing ____________________
2. easy est ____________________
3. falsify ing ____________________
4. accompany ed ____________________
5. mercy less ____________________
6. busy ly ____________________
7. tally ed ____________________
8. coy ness ____________________
9. envy ed ____________________
10. buy ing ____________________

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 9--SPELLING

DIRECTIONS: Determine whether or not the final consonant of each word below should be doubled before adding the ending shown. Correctly spell the word on the line provided.

1. differ ent ____________________
2. prefer ing ____________________
3. account ing ____________________
4. prefer ence ____________________
5. occur ence ____________________
6. allot ment ____________________
7. regret able ____________________
8. can ed ____________________
9. control ed ____________________
10. happen ing ____________________

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 10--SPELLING

DIRECTIONS: Determine whether or not the "silent e" at the end of the words below would remain when adding the endings shown. Spell each word correctly on the line provided.

1. excite ment ____________________
2. abbreviate ing ____________________
3. imagine ary ____________________
4. sincere ly ____________________
5. require ment ____________________
6. outrage ous ____________________
7. force ible ____________________
8. service able ____________________
9. conceive able ____________________
10. assure ance ____________________

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 11--SPELLING

DIRECTIONS: Words that give the most trouble--those most often misspelled--are short ones. In the following sentences, circle the correct word(s).

1. (Its, It's) necessary for (you're, your) spelling to be correct.
2. (Who's, Whose) taking (they're, their) cars to the ballgame?
3. Mary said (your, you're) not coming to the party, and I told her (its, it's) (two, to) bad because your favorite boyfriend will be (there, their).
4. The weather is (to, too, two) hot to enjoy swimming in (there, their) pool.
5. Please go (to, too, two) the store and pick up (they're, there, their) groceries.
6. She is (hair, hare, heir) to a large fortune.
7. He did not (dessert, desert) the ship.
8. Everyone rushed to (aid, aide, ade) the wreck victims.
9. The bartender said he sold more beer than (ail, ale).
10. The bride's attendants walked down the (isle, aisle) to the (alter, altar).
11. She (allowed, aloud) the band to play at the pep rally.
12. They heard the (beet, beat) of the tom-toms in the jungle village.

UNIT V

LANGUAGE USAGE

INFORMATION SHEET 3--PUNCTUATION

I. Terms and Definitions

- A. Appositive--a word or group of words that renames the noun that precedes it.
- B. Coordinating adjectives--two or more adjectives that modify the same noun and are not separated by a conjunction.
- C. Independent clause--a group of words that can stand alone as a sentence.
- D. Introductory words or phrases--words and phrases that are not necessary to the meaning of the sentence but help to connect the thoughts in one sentence to those in another.
- E. Parenthetical--words and phrases that provide additional information, clarify information given, or contrast an idea with the main part of the sentence. Often found within and at the end of a sentence.
- F. Phrase--a group of words that does not contain a subject and a predicate.

II. Introduction

- A. Uses of punctuation marks
  1. To make clearer the meaning of what is written.
  2. To help make reading easier by the way they stop the eye or slow the thought process.
- B. Purposes of punctuation marks
  1. To end or terminate a statement.
  2. To introduce.
  3. To enclose.
  4. To indicate an omission.
  5. To separate sentence parts.
  6. To indicate possession.
  7. To show word division at the end of a line.

C. Types of punctuation marks

.	period
!	exclamation point
-	hyphen
( )	parentheses
,	comma
--	dash
" "	double quotation marks
?	question mark
'	apostrophe
' '	single quotation marks
[ ]	brackets

III. Rules for Punctuation

(NOTE: Because there are so many rules for using punctuation marks, they are not all covered in this section. Refer to a reference manual when in doubt concerning the use of punctuation marks.)

A. Comma

1. To separate independent clauses joined by a coordinating conjunction (and, but, or, nor).

   EXAMPLE: We are going home, but Jackie will stay with you.

2. To separate words, phrases, and clauses in a series.

   EXAMPLE: Tammy, Jim, and Mike will be attending the meeting.

3. After introductory words and phrases.

   EXAMPLE: Before she made the appointment, she checked her calendar.

4. To set off parenthetical expressions in sentences.

   EXAMPLE: We are, however, unable to meet with you at this time.

5. To set off an appositive.

   EXAMPLE: The director, Jean Moore, attended the meeting.

6. Between coordinating adjectives.

   EXAMPLE: She was a very dependable, competent secretary.

7. To set off a direct address.

   EXAMPLE: Thank you for your order, Mrs. McKenzie.

8. To show omissions of words that are easily understood from the context of the sentence.

   EXAMPLE: The first order will be shipped on November 13 and the second, on December 1.

9. To set off a direct quotation from the rest of the sentence.

   EXAMPLE: "The meeting will be held in the conference room," announced the director.

10. To separate words that are repeated for emphasis.

    EXAMPLE: We are very, very happy about your promotion.

11. To set off titles, degrees, and seniority designations that accompany a person's name.

    EXAMPLE: Jennifer Schew, M.D., assumes her new position on January 1.

12. To separate the day of the week from the month and the month from the year.

    EXAMPLE: Friday, November 13, 1982.

13. To separate thousands, hundred thousands, millions, etc., in numbers consisting of four or more digits.

    EXAMPLE: $1,226,000

B. Semicolon

1. Between clauses in a compound sentence when the two clauses are not joined by a conjunction.

   EXAMPLE: The copier is out of order; the drum has to be replaced.

2. Before a conjunctive adjective (however, therefore, otherwise) when the adjective joins two independent clauses.

   EXAMPLE: The copier is out of order; otherwise, you could make the copies you need.

3. Between independent clauses that are joined by a conjunction if either or both of the clauses contain internal commas.

   EXAMPLE: Bob, Ted, and Alice will attend the conference in Atlanta; and Diane will attend the one in Dallas.

4. Between members of a series when one or more of the members contains a comma.

   EXAMPLE: The new officers are: Mary Thompson, president; Jim Smith, vice president; and Tom Jones, secretary.

C. Colon

1. After an expression such as these or the following when that expression is used to introduce a series of items.

   EXAMPLE: You will need the following items when you take the test: a reference manual, pencil, and paper.

2. To separate an introduction from a long quotation.

   EXAMPLE: President Kennedy used this quotation in his inauguration address: "Ask not what your country can do for you; ask what you can do for your country."

3. To introduce lists, tabulations, enumerations, words, or phrases.

   EXAMPLE: Do these things before you leave the office: clean up the coffee room, lock the file cabinets, turn off the lights, lock the door.

4. In place of the words that is or for example after a statement that introduces an example or an explanation that clarifies the beginning of the sentence.

   EXAMPLE: We have to make a decision: to leave this work unfinished or to stay late at the office.

5. After the salutation of a business letter if a comma is used after the complimentary close.

   EXAMPLE: Dear Ms. Glasco:

6. Between the hours and minutes in clock times that are expressed in figures.

   EXAMPLE: 10:45 a.m.

D. Dash

1. To emphasize a word or group of words.

   EXAMPLE: The car was flashy, long, powerful--and expensive.

2. To indicate a break or shift in thought.

   EXAMPLE: That car--the one with the personalized license plate--belongs to the president of the Chamber of Commerce.

3. To indicate an omission of letters and words and to connect combinations of letters and figures.

   EXAMPLE: from 9--5 1962--1981

E. Parentheses

1. To enclose material that is supplementary or explanatory.

   EXAMPLE: In the following sentences, circle the correct pronoun (refer to Chart 1 on page 55).

2. To enclose figures to indicate an enumeration.

   EXAMPLE: You will need the following items: (1) a reference manual, (2) a pad, and (3) a pencil.

3. To enclose numbers that follow the written number to insure accuracy.

   EXAMPLE: The car is five (5) years old.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 12--INSERTING PUNCTUATION MARKS

DIRECTIONS: In the following sentences, insert the commas and semicolons where they are needed. Circle the punctuation marks inserted.

1. This is not to imply however that the nation's offices should be building undefined systems.
2. The text-editor consists of a CRT screen a separate movable keyboard and a combined printer with a mini-diskette.
3. With this equipment your people work faster more accurately.
4. Additional chapters are being organized in Chicago Illinois Tacoma Washington Dallas Texas and Miami Florida.
5. For more information contact Joan Webber 1669 South Voss Road Houston Texas.
6. Hubert said "This is a national program that benefits us all."
7. Carpets draperies plants and pictures add decorative touches.
8. Our marketing manager John Bartuska will be able to give you more information.
9. The financial payoff is savings of $20000 a month conservatively measured.
10. They feel more important and because of their increase in productivity salaries have been adjusted to recognize this improvement.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 13--INSERTING PUNCTUATION MARKS

DIRECTIONS: In the following sentences, insert the colons, dashes, and parentheses where they are needed. Circle the punctuation marks inserted.

1. The movement towards office automation is being urged by yet another management mandate to increase white-collar productivity.

2. To receive more information, mail the coupon or call toll free except Alaska and Hawaii 800/625-5198.

3. Because the new text-editor is a shared-resource system, each terminal the printer, as well as the CRT has its own intelligence.

4. The purposes of the organization are 1 to act as a trade association for all members; 2 to act as a coordinator for the assimilation and distribution of information; 3 to enhance the recognition of the members.

5. The report also agreed with another argument of industry that wage protection for these workers is not needed.

6. Don't buy too little or too much word processing equipment.

7. Our study approach involved careful cost-benefit and ROI return on investment analyses for each business case.

8. Now only one decision remains which supplies to use.

9. Tom can look forward to having almost an extra hour 59 minutes to do the things he would rather do.

10. There are many functions that could be performed with the new system, including 1 voice, 2 data slow and high speed, 3 electronic mail, 4 security, and 5 facsimile.

LANGUAGE USAGE

ACTIVITY SHEET 14--INSERTING PUNCTUATION MARKS

DIRECTIONS: Read through the paragraphs below and insert punctuation marks where they are needed. Circle the marks inserted.

After a recent state staff meeting Bob Gordon the state director asked each area consultant to present ideas for improvement in the following areas 1 instruction 2 teacher certification and 3 program evaluation He also asked that the ideas be submitted no later than August 1 1982 The purpose of this memo Betty is to secure information regarding teacher certification

In the meeting with the staff Bob said we needed accurate data to ensure that program improvement is achieved across the state Since this is the case I wonder if you can supply me with a copy of the program evaluation plan which you presented at the meeting

Can you also supply me with the outline of instruction for each program in the state I feel this outline will clearly indicate the direction we should take

LANGUAGE USAGE

INFORMATION SHEET 4--CAPITALIZATION AND EXPRESSION OF NUMBERS

I. Rules for capitalization

(NOTE: Always consult a reference manual when in doubt about capitalization and expression of numbers.)

A. Always capitalize the first word of every sentence, and this applies to every quoted sentence.

EXAMPLES: I went to town.

Mary said, "I went to town."

B. Always capitalize proper nouns

1. Names of people and titles used for specific persons.

EXAMPLES: John Smith Mary Jones

Mayor Tom Young

2. Names of countries, states, regions, localities, geographic areas, etc.

EXAMPLES: Germany, England, France, Texas, Oklahoma, Arkansas, the Blue Ridge Mountains, the Sahara Desert, Lake Erie, the Midwest, Western civilization, the Panhandle.

3. Names of the months and days of the week--January, February, March, etc.; Sunday, Monday, Tuesday, etc.; but never the seasons: spring, summer, autumn, fall, winter.

4. Trade names--Xerox, Frigidaire, Vaseline; but not generic names--copier, refrigerator, petroleum jelly

5. Names of historic events, eras, holidays.

Civil War, Christmas, Yom Kippur, Thanksgiving, Labor Day, the Great Depression.

6. Titles of high government officials--President Reagan, or Ronald Reagan, President of the United States; Cabinet members, Senators, Representatives, Chief Justice, etc.

7. Titles that precede the name of the person--President Charlie Jones; but not titles that follow the name--Charlie Jones, president of City University.

8. Capitalize names of academic degrees and honors when following a personal name, whether abbreviated or in full.

   (NOTE: When academic degrees are referred to in such general terms as doctorate, bachelor's, masters, etc., they are not capitalized.)

   EXAMPLES: Clarence J. Professor, Doctor of Law

   John K. Healer, M.D.

   Roderick England, Fellow of the Royal Academy

C. Always capitalize every important word in the title of a book, play, magazine, musical composition.

   EXAMPLES: book - The Old Curiosity Shop

   play - Much Ado About Nothing

   magazine - Better Homes and Gardens

   music - The Star-Spangled Banner

D. In an outline, always capitalize the first word at the beginning of each item beside a letter or number.

II. Rules for Expression of Numbers

A. Write the number as a word if it appears at the beginning of a sentence.

   EXAMPLE: Twenty-five students enrolled in the communication course.

B. Write numbered street names (one-ten) as words.

   EXAMPLES: The employment agency is located on Tenth Avenue. I live on 42nd Street.

C. Write these numbers as figures:

1. Credit card, telephone, model, invoice, serial, and similar numbers.

   EXAMPLE: My credit card number is 95908-9499. If you need any further information, call 512/821-9620.

2. A date that follows the name of a month.

   EXAMPLE: I was born on December 25.

3. A year.

   EXAMPLE: She taught here from 1976 through 1979.

4. Dollar amounts.

   EXAMPLE: The copier cost $6,000 and we charge 10 cents for each copy made.

5. Percentages and discount terms.

   EXAMPLE: We received a 10 percent discount by paying our bill within 10 days.

6. Measurements

   EXAMPLE: When mailing the report, use a 9-inch envelope.

D. Write the numbers one through ten as words and the numbers above ten as figures.

EXCEPTION: If you are referring to a particular number, write the number as a figure.

EXAMPLES: There will be four students attending the leadership conference.

There will be a run-off between contestants 1 and 5.

E. Write all numbers in figures if a series of three or more numbers appear in a sentence.

EXAMPLE: There were 20 contestants entered in Shorthand I, 3 entered in Shorthand II, and 10 in Information-Communication I.

F. Write one number in words and the other in figures when two numbers occur next to each other in a sentence.

(NOTE: The one written in words should be the one that is the easiest to spell out.)

EXAMPLE: Order three 3-pound packages and one 12-pound package of sausage.

G. Write fractions that stand alone as words; however, a series of fractions or a fraction that accompanies a whole number should be expressed in figures.

EXAMPLES: You should receive one-third of the refund this afternoon.

The paper measures 8½ inches across.

H. Use figures to express times that accompany a.m. or p.m., but spell out an on-the-hour time.

EXAMPLES: The plane departs at 10:25 a.m. and arrives in Houston at 11 a.m.

The meeting begins at one o'clock.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 15--CAPITALIZATION

DIRECTIONS: Draw three lines under each letter that should be capitalized in the following sentences.

1. The red river separates texas from oklahoma.
2. Mary invited mayor young to speak at the luncheon.
3. We visited senator tower when we were in washington, d.c.
4. Our annual fall sale will be held in november of this year.
5. The anatole hotel is located west of central expressway.
6. We celebrate the declaration of independence on july 4.
7. We get out for christmas on tuesday, december 20.
8. She is taking physics, algebra, and german this semester.
9. The advertising agency of tracy-locke and co. is handling our next promotional campaign.
10. Mary J. Hannon, ph.d., is president of s.a.i. corporation.

LANGUAGE USAGE

ACTIVITY SHEET 16--CAPITALIZATION

DIRECTIONS: In the following letter, draw three lines under each letter that should be capitalized.

mrs. jane affluent
4207 murphy lane
oxford city, new mexico

dear mrs. affluent:

are you one of the many wealthy new mexico ranchers who would like to occasionally spend a few days or a few weeks away from your isolated section of the southwest, but whose business interests demand that you be available to make decisions pertaining to your san gabriel spread? the rich catering company in the sunny rio grande valley may have the answer to your situation. We are only a few hours by plane from the sandia airport which adjoins your ranch. we are near the galleria shopping center in southwest houston, the interesting river walk area of san antonio, the fascinating charm of monterrey, mexico, and the deep sea fishing marina on south padre island. Our hotel, with its mexican adobe and tile decor, features nightly entertainment by big-name stars in our la paloma room. individual suites are equipped with spring spa hot tubs, and an expert beautician is available when a patron wishes to have a shampoo and set.

if you are interested in seeing our hotel accommodations, notify american travelers airline and you will be assigned a flight to rich's at a time convenient to you.

christmas is our busiest season, so make your reservations early if you wish to come in late december and early january.

very truly yours,

p.r. mann
promotion director

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 17--EXPRESSION OF NUMBERS

DIRECTIONS: In each of the following sentences, circle the numbers that are expressed incorrectly. Indicate in the space above the error how the number should be written correctly.

1. Cancellations made less than 3 days prior to the date of the program are subject to a fifty dollar cancellation fee.
2. Teams of twelve individuals receive a ten percent discount if received by December fifth.
3. The meeting starts at nine a.m. and ends at 4 o'clock.
4. 100 participants were registered for the conference.
5. They purchased three text-editors, 10 transcription units, and one printer.
6. The optional rack can store eight binders with four disk packs or eight tapes.
7. By nineteen eighty-five, the market for videotex/teletext services will increase one hundred thousand dollars.
8. You can cut telephone charges by 1/4 or twenty-five percent.
9. Our continuous check forms are three and one-half inches wide.
10. There are twenty-five originators and nine word processing specialists.

UNIT V

LANGUAGE USAGE

INFORMATION SHEET 5--ABBREVIATIONS

I. Rules for Using Abbreviations

   A. Use to save space in such materials as tables, statistical matters, footnotes, etc.

   B. Be consistent. Do not abbreviate one time, then spell out the word the next time it is used.

   C. Use a dictionary to check the proper abbreviation of words if you are in doubt.

   D. Use the abbreviation of a word rather than the contraction.

II. Rules for Personal Names

   A. Spell out personal names; do not abbreviate.

   (NOTE: Saint may be abbreviated, St.)

   EXAMPLE: William, not Wm.

   George, not Geo.

   B. Always abbreviate Mister (Mr.), Mistress (Mrs.), Ms, Doctor (Dr.), in front of a person's name.

   EXAMPLE: Dr. Sherry North

   C. Abbreviate a title that is used with both a first and last name.

   EXAMPLE: Rep. Sam Hall

   D. Do not abbreviate a title when it is used with a last name only.

   EXAMPLE: Representative Hall

   Senator Tower

   E. Abbreviate seniority titles, academic degrees, or designation of a religious order when it follows a full name.

   (NOTE: Place periods after each part of the abbreviation.)

   EXAMPLE: E. W. Rountree, Jr.

   Jill Smith, LL.D.

III. Miscellaneous Rules

A. Use the abbreviated form of a company or organization name if it is best known by this form.

(NOTE: Do not use periods in the abbreviation.)

EXAMPLE: ABC--American Broadcasting Company

OEA--Office Education Association

B. Abbreviate names of countries and states when used in addresses.

(NOTE: Use the two-letter abbreviations approved by the United States Postal Service.)

EXAMPLE: P.O. Box 752, Commerce, TX 75428

C. Spell in full the names of countries and states when used in sentences.

EXAMPLE: We will visit Texas, New Mexico and Colorado during our vacation.

D. Do not abbreviate the name of a city.

(NOTE: Saint may be abbreviated St.)

EXAMPLE: Los Angeles,not L. A.

Fort Worth,not Ft. Worth

E. Always abbreviate

1. Time periods of the day

(NOTE: Type in lower case letters followed by periods. In printing, small capital letters may be used if available.)

EXAMPLE: 9:15 a.m. and 3:30 p.m.

2. Designations of time zones

EXAMPLE: 11:10 p.m. (CST)

3. Commonly used business abbreviations

EXAMPLE: FOB (free on board)

F. Do not abbreviate

1. Compass points such as north or northeast, unless they are used after street names to indicate a part of a city.

EXAMPLE: My house is south of Culver on Jackson Street, E.

2. Names of days or months

   EXAMPLE: Monday, not Mon. January, not Jan.

3. Units of measurement, unless they are used with numbers in a table, on an invoice, etc.

   EXAMPLE: Use one gallon of water to one tablespoon of lime.

4. The words noon or midnight.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 18--ABBREVIATIONS

DIRECTIONS: Read each of the sentences below. Circle any word that is written incorrectly and insert the correct form above the error.

1. Sen. Tower will speak before the U.S. Congress on Mon., Jan. 8th.

2. Doctor Robt. L. Griffin, Junior, will attend a convention in Atlanta, Ga. next week.

3. The participants in the conference came from several cities, including San Antonio, Ft. Worth, Saint Paul, and L.A.

4. The Convention Center is located in N. Dallas.

5. Legal size paper measures 8 1/2 x 14 in.

6. The flight leaves Dallas at 7:45 AM (cst) and arrives in N.Y. at 10:15 a.m. (est).

7. Orders should be sent cod to 2406 Elm Street, Dallas, TX 75207.

UNIT V

LANGUAGE USAGE

INFORMATION SHEET 6--WRITING SENTENCES

I. Terms and Definitions

A. Clause--a group of related words containing a subject and a predicate.

B. Collective noun--a word that gives a name to something that is made up of several persons, objects, or units, i.e., class, group, team, etc.

C. Modifier--anything that limits, qualifies, or adds to (elaborates or expands) another unit of the sentence.

EXAMPLE: $\underset{M}{\text{That}}\ \underset{S}{\text{copier}}\ \underset{P}{\text{reproduces}}\ \underset{M}{\text{accurately.}}$

D. Phrase--a group of related words that does not contain both a subject and a predicate.

E. Predicate--some declaration about the subject; is often made up of a verb plus a complement (something that completes the verb).

F. Sentence--a complete thought; the use of words to express a complete thought.

G. Subject--something that is talked about; a word (or group of words) that functions as a noun.

II. Types of Clauses

A. Independent clause

1. Contains a subject and a predicate.
2. Expresses a complete thought.
3. May stand alone as a complete sentence.

EXAMPLE: The $\underset{S}{\underline{\text{technician}}}$ $\underset{P}{\underline{\text{repaired}}}$ the terminal.

B. Dependent clause

1. Contains a subject and a predicate.
2. Does not express a complete thought.
3. Cannot stand alone as a complete sentence.

EXAMPLE: As soon as the $\underset{S}{\underline{\text{terminal}}}$ $\underset{P}{\underline{\text{is}}}$ delivered

III. Types of Sentences

A. Simple sentence

1. Uses one subject and one predicate to convey a message.

2. Makes straight-forward statements of fact.

3. Adds emphasis when placed among longer, more complex sentences.

EXAMPLE: $\underset{\text{S}}{\underline{\text{We}}}$ $\underset{\text{P}}{\underline{\text{returned}}}$ home.

B. Compound sentence

1. Contrasts or compares two closely related ideas or

2. Demonstrates how two ideas fit together.

3. Uses two independent clauses joined by a coordinating conjunction that makes the relationship of the clauses clear.

EXAMPLE: The board members will meet after the dinner, and they will elect a new chairperson.

C. Complex sentence

1. Contains one independent clause and one or more dependent clauses.

2. Shows how one thing influences another.

(NOTE: The dependent clause relies on the independent clause to give it meaning.)

EXAMPLE: $\underset{\text{Dependent clause}}{\underline{\text{Since the board members will meet in a closed}}}$

$\underline{\text{session}}$, $\underset{\text{Independent clause}}{\underline{\text{we cannot attend}}}$.

IV. Rules for Writing Sentences

A. Agreement of subject and verb

1. Simple sentences

   a. Use a singular verb with a singular subject.

   EXAMPLE: $\underset{\text{ss}}{\underline{\text{He}}}$ $\underset{\text{sv}}{\underline{\text{is}}}$ going to town.

   b. Use a plural verb with a plural subject.

   EXAMPLE: $\underset{\text{ps}}{\underline{\text{We}}}$ $\underset{\text{pv}}{\underline{\text{are}}}$ going to town.

2. Compound subjects joined by and

   a. Use a plural verb when the elements in a compound subject are joined by the conjunction and.

      (NOTE: Use a singular verb when the two elements joined by and are considered one unit.)

      EXAMPLES: A reference book and a resume $\underset{\text{PV}}{\underline{\text{are}}}$ required for the interview.

      My friend and co-worker Diane $\underset{\text{SV}}{\underline{\text{has}}}$ helped me a great deal.

   b. Use a singular verb if a compound subject is preceded by each or every.

      EXAMPLE: Each man and woman at the university $\underset{\text{SV}}{\underline{\text{is}}}$ covered by the insurance policy.

3. Compound subjects joined by or and nor

   a. Use a singular verb when singular subjects are joined by or or nor.

      EXAMPLE: Neither Pam nor Diane $\underset{\text{SV}}{\underline{\text{is}}}$ able to attend the meeting.

   b. Use a verb that agrees in number and person with the nearer subject when one subject is singular and one is plural.

      EXAMPLE: Either the director or the board members $\underset{\text{PV}}{\underline{\text{are}}}$ going to the meeting.

4. Nouns in plural form

   a. Use a singular verb with nouns that are plural in form but singular in meaning, i.e. scissors, pants, mumps, etc.

      EXAMPLE: Physics $\underset{\text{SV}}{\underline{\text{is}}}$ being offered next fall.

   b. Use a singular verb when a plural noun describes a sum of money, a quantity, or a number.

      EXAMPLES: Fifty pounds $\underset{\text{SV}}{\underline{\text{is}}}$ a lot of weight to gain in one year.

      The $100 $\underset{\text{SV}}{\underline{\text{is}}}$ to be used for supplies.

      The number of participants $\underset{\text{SV}}{\underline{\text{has}}}$ increased from last year's meeting.

5. Collective nouns

a. Use a singular verb if the collective noun is considered as a unit.

EXAMPLE: The class $\underset{\text{SV}}{\underline{\text{is}}}$ on a field trip.

b. Use a plural verb if the collective noun is being considered as separate individuals, objects, or units.

EXAMPLE: The faculty $\underset{\text{PV}}{\underline{\text{are}}}$ working on their lesson plans.

B. Run-on sentences

To avoid run-on sentences (including too much information in one sentence), follow these rules.

Run-on sentence: Karen and Chuck were members of the same committee they gave the same report.

1. Use a comma and a coordinating conjunction to connect the two independent clauses if they are of equal importance.

EXAMPLE: Karen and Chuck were members of the same committee, and they gave a joint report.

2. Use a semicolon without a coordinating conjunction to connect the two independent clauses if they are close enough in thought to make one sentence.

EXAMPLE: Karen and Chuck were members of the same committee; they gave a joint report.

3. Subordinate one of the independent clauses.

EXAMPLE: Because Karen and Chuck were members of the same committee, they gave a joint report.

4. Write the independent clauses as separate sentence.

EXAMPLE: Karen and Chuck were members of the same committee. They gave a joint report.

V. Tips when Writing Sentences

A. Vary the length and complexity of sentences.

1. Combine related short, choppy sentences into one sentence that flows more smoothly.

Incorrect: We completed our work. We went home.

Correct: When we completed our work, we went home.

2. Use several sentences to avoid having a long "run-on sentence."

   Incorrect: Jack and Diane went to see a Neal Simon play the other night they said it was the funniest play they had ever seen.

   Correct: Jack and Diane went to see a Neal Simon play the other night. They said it was the funniest play they had ever seen.

B. Use only the words necessary to convey the meaning of the sentence.

   1. Eliminate unnecessary words.

   2. Be concise; get to the point.

   Incorrect: The undoubtedly highest and widest circus tent in the world was erected this bright and beautiful morning in a field which was once a meadow just outside of town.

   Correct: The world's largest circus tent was erected this morning just outside of town.

C. Write sentences in the active voice (the subject of the sentence is doing something) rather than in the passive voice.

   EXAMPLE: I paid the bill. (Active voice)

   The bill was paid by me. (Passive voice)

D. Use words that clearly express the ideas behind the sentence.

   1. Use "picture" words--words that cause the reader to "see" exactly what the writer is saying.

   2. Use a variety of words to express an idea.

   EXAMPLE: Good The furry grey squirrel raced across the snow covered lawn and up the thick trunk of a leafless tree.

   Poor The squirrel ran across the lawn and up a tree.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 19--IDENTIFYING SUBJECTS AND VERBS

A. Directions: In each of the following sentences underline the subject once and the verb twice.

1. Mrs. Jones stayed for about 15 minutes.
2. He confessed that he committed the crime.
3. Did you enjoy the book?
4. Does your firm employ women executives?
5. This firm employs women executives.
6. The letters and packages were mailed this morning.
7. The officers welcomed the new members.
8. Nearly everyone attended, including the teacher and the principal.
9. Salaries in our school rose slightly last year.

B. Directions: Identify the complete sentences by placing a C in the correct spaces.

_____ 1. Hurrying to my typing class.

_____ 2. Where is she going?

_____ 3. Because years of experience, we can do the best job.

_____ 4. Because we have years of experience, we can do the best job.

_____ 5. If we can have one wish.

_____ 6. John Wayne--a tall, heavy figure, like a statue of a hero, broad-shouldered, brave.

_____ 7. All the typewriters having been broken.

_____ 8. We shot down the hill at top speed and hit the snowbank.

_____ 9. But when the bell rings.

_____10. A joke that no one catches is not much of a joke.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 20--SELECTING VERBS

DIRECTIONS: In the following sentences, circle the words that make the sentence structure correct. In the blank, identify each word selected as S (singular) or P (plural).

_____ 1. Each order (has, have) been filled.

_____ 2. News of oil price increases (has, have) made me think twice about buying a car.

_____ 3. Seventy-five miles an hour (are, is) over the speed limit.

_____ 4. The members of the committee (are, is) trying to decide.

_____ 5. The jury (is, are) meeting to reach a verdict.

_____ 6. Here (is, are) the list of names you requested.

_____ 7. She felt that neither the time nor the place (was, were) appropriate for the meeting.

_____ 8. Either the teacher or the students (is, are) going to make the presentation.

_____ 9. Each of the children, when accompanied by his/her parents, (is, are) to receive a free pass.

_____10. Bread and butter (is, are) a usual part of a meal.

UNIT V

LANGUAGE USAGE

ACTIVITY SHEET 21--WRITING SENTENCES

DIRECTIONS: Rewrite the following sentences, eliminating errors.

1. Wilson hit the middle of the line three times, he failed to make a first down.

2. While climbing off the horse, his pants caught on the stirrup.

3. She only had one sister.

4. While trying to make an impression on the class, his feet caught on the chair leg and he fell flat on his face.

5. We, during the trip, shared the car expenses.

6. I needed a shampoo and set, and the beauty shop was closed.

7. We ran out of gas, but we would have been here much sooner.

8. I hope to sometime this week visit the art exhibit.

9. Before using the machine, it must be plugged in.

10. Stored in the back of the closet, the secretary found the paper.

UNIT V

LANGUAGE USAGE

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

1. sold
2. walked
3. typed
4. like
5. initiated
6. brought
7. attended
8. prepared
9. is
10. sank

Activity Sheet 2

1. you program
2. Our equipment time
3. She dictation
4. Our firm specialists
5. We help we job
6. Christmas shops people
7. number applicants job
8. machinery maintenance
9. I game
10. actions words

Activity Sheet 3

1. a, b
2. c, b
3. b
4. c, a
5. b
6. a, b
7. c, b
8. c, a
9. b
10. a, b, b

Activity Sheet 4

1. me
2. He, I
3. me
4. we
5. me
6. she, I
7. me
8. me
9. we
10. me

Activity Sheet 5

(Possessive pronouns shown in Items 2, 5, 6, & 7 may or may not be identified as adjectives.)

1. slowly the tool the new
2. my blue
3. The a shiny
4. hard all
5. His latest a big
6. well her new
7. your final
8. very easy
9. The fewer this
10. the fastest the

Activity Sheet 6

1. of
2. in, to
3. about
4. to, from
5. for
6. on
7. since
8. in
9. with
10. across

Activity Sheet 7

1. neighbor
2. receive
3. receipt
4. lien
5. brief
6. efficient
7. leisure
8. weird
9. thief
10. shield
11. lieutenant
12. neither
13. seize
14. niece
15. seizure
16. deceive
17. foreign
18. height
19. grievous
20. sieve

Activity Sheet 8

1. lobbying
2. easiest
3. falsifying
4. accompanied
5. merciless
6. busily
7. tallied
8. coyness
9. envied
10. buying

Activity Sheet 9

1. different
2. preferring
3. accounting
4. preference
5. occurrence
6. allotment
7. regrettable
8. canned
9. controlled
10. happening

Activity Sheet 10

1. excitement
2. abbreviating
3. imaginary
4. sincerely
5. requirement
6. outrageous
7. forcible
8. serviceable
9. conceivable
10. assurance

Activity Sheet 11

1. It's, your
2. Who's, their
3. you're, it's, to, there
4. too, their
5. to, their
6. heir
7. desert
8. aid
9. ale
10. aisle, altar
11. allowed
12. beat

Activity Sheet 12

1. This is not to imply, however, that the nation's offices should be building undefined systems.
2. The text-editors consists of a CRT screen, separate movable keyboard, and a combined printer with a mini-diskette.
3. With this equipment, your people work faster, more accurately.
4. Additional chapters are being organized in Chicago, Illinois; Tacoma, Washington; Dallas, Texas; and Miami, Florida.
5. For more information, contact Joan Webber, 1669 South Voss Road, Houston, Texas.
6. Hubert said, "This is a national program that benefits us all."
7. Carpets, draperies, plants, and pictures add decorative touches.
8. Our marketing manager, John Bartuska, will be able to give you more information.
9. The financial payoff is savings of $20,000 a month, conservatively measured.
10. They feel more important, and because of their increase in productivity, salaries have been adjusted to recognize this improvement.

Activity Sheet 13

1. The movement towards office automation is being urged by yet another management mandate--to increase white-collar prodictivity.

2. To receive more information, mail the coupon or call toll free (except Alaska and Hawaii) 801/625-5198.

3. Because the new text-editor is a shared-resource system, each terminal--the printer, as well as the CRT--has its own intelligence.

4. The purposes of the organization are: (1) to act as a trade association for all members; (2) to act as a coordinator for the assimilation and distribution of information; (3) to enhance the recognition of the members.

5. The report also agreed with another argument of industry--that wage protection for these workers is not needed.

6. Don't buy too little--or too much--word processing equipment.

7. Our study approach involved careful cost-benefit and ROI (return on investment) analyses for each business case.

8. Now only one decision remains--which supplies to use.

9. Tom can look forward to having almost an extra hour (59 minutes) to do the things he would rather do.

10. There are many functions that could be performed with the new system, including: (1) voice, (2) data (slow and high speed), (3) electronic mail, (4) security, and (5) facsimile.

Activity Sheet 14

After a recent state staff meeting, Bob Gordon, the state director, asked each area consultant to present ideas for improvement in the following areas: (1) instruction, (2) teacher certification, and (3) program evaluation. He also asked that the ideas be submitted no later than August 1, 1982. The purpose of this memo, Betty, is to secure information regarding teacher certification.

In the meeting with the staff, Bob said we needed accurate data to ensure that program improvement is achieved across the state. Since this is the case, I wonder if you can supply me with a copy of the program evaluation plan which you presented at the meeting?

Can you also supply me with the outline of instruction for each program in the state? I feel this outline will clearly indicate the direction we should take.

Activity Sheet 15

1. The Red River separates Texas from Oklahoma.
2. Mary invited Mayor Young to speak at the luncheon.
3. We visited Senator Tower when we were in Washington, D.C.
4. Our annual fall sale will be held in November of this year.
5. The Anatole Hotel is located west of Central Expressway.
6. We celebrate the Declaration of Independence on July 4.
7. We get out for Christmas on Tuesday, December 20.
8. She is taking physics, algebra, and German this semester.
9. The advertising agency of Tracy-Locke and Co. is handling our next promotional campaign.
10. Mary J. Hannon, Ph.D., is president of S.A.I. corporation.

Activity Sheet 16

Mrs. Jane Affluent
4207 Murphy Lane
Oxford City, New Mexico

Dear Mrs. Affluent:

Are you one of the many wealthy New Mexico ranchers who would like to occasionally spend a few days or a few weeks away from your isolated section of the Southwest, but whose business interests demand that you be available to make decisions pertaining to your San Gabriel spread? The Rich Catering Company in the sunny Rio Grande Valley may have the answer to your situation. We are only a few hours by plane from the Sandia Airport which adjoins your ranch. We are near the Galleria Shopping Center in southwest Houston, the interesting River Walk area of San Antonio, the fascinating charm of Monterey, Mexico, and the deep sea fishing marina on South Padre Island.

Our hotel, with its Mexican adobe and tile decor, features nightly entertainment by big name stars, in our La Paloma Room. Individual suites are equipped with Spring Spa hot tubs, and an expert beautician is available when a patron wishes to have a shampoo and set.

If you are interested in seeing our hotel accommodations, notify American Travelers Airline, and you will be assigned a flight to Rich's at a time convenient to you.

Christmas is our busiest season, so make your reservations early if you wish to come in late December and early January.

Very truly yours,

P.R. Mann
Promotion Director

Activity Sheet 17

1. Three days, $50
2. 12, 10 percent, December 5
3. 9 a.m., four o'clock
4. One hundred
5. 3 text-editors, 1 printer
6. 8 binders, 4 disk packs, 8 tapes
7. 1985 $100,000.
8. one-fourth, 25 percent
9. 3 1/2 inches
10. 25 originators

Activity Sheet 18

Senator United States Monday, January
1. Sen. Tower will speak before the U. S. Congress on Mon., Jan. 8.

Dr. Robert Jr.
2. Doctor Rob't L. Griffin, Junior, will attend a convention in
Georgia
Atlanta, Ga. next week.

3. The participants at the conference come from several cities,
Fort St. Los Angeles
including San Antonio, Ft. Worth, Saint Paul, and L. A.

North
4. The Convention Center is located in N. Dallas.

inches
5. Legal size paper measures 8 1/2 x 11 in.

a.m. (CST) New York
6. The flight leaves Dallas at 7:45 AM (cst and arrives in N.Y.
(EST)
at 10:15 a.m. (est).

C.O.D. Texas
7. Orders should be sent cod to 2406 Elm Street, Dallas, TX 75207.

Activity Sheet 19

A. 1. Mrs. Jones stayed

2. He confessed

3. your Did enjoy

4. firm does employ

5. firm employs

6. letters and packages were mailed

7. Officers welcomed

8. everyone attended

9. Salaries rose

B. 1.

2. C

3.

4. C

5.

6.

7.

8. C

9.

10. C

Activity Sheet 20

1. has S
2. has S
3. is S
4. are P
5. is S
6. is S
7. was S
8. are P
9. is S
10. is S

Activity Sheet 21

1. Wilson hit the middle of the line three times and failed to make a first down.
2. While climbing off the horse, he caught his pants on the stirrup.
3. She had only one sister.
4. While trying to make an impression on the class, he caught his feet on the chair leg and fell flat on his face.
5. During the trip, we shared car expenses.
6. I needed a shampoo and set, but the beauty shop was closed.
7. We ran out of gas, or we would have been here much sooner.
8. I hope to visit the art exhibit sometime this week.
9. Before you use the machine, you must plug it in.
10. The secretary found the paper stored in the back of the closet.

UNIT V

LANGUAGE USAGE

UNIT TEST--PART I

A. Match the correct term associated with the parts of speech to the correct definition by placing the letter in the appropriate space.

______ 1. A word that expresses action being or an occurrence.

______ 2. A word that names something.

______ 3. A noun that names ordinary objects, human beings, animals, etc.

______ 4. A noun that names particular persons, places, and things.

______ 5. A noun that names conditions and qualities.

______ 6. A noun that names collections or groups of persons, animals, and things.

______ 7. A word that is used as a substitute for a noun.

______ 8. A word that introduces a phrase.

______ 9. A substitute for definite persons or things.

______10. A substitute for things that are possessed.

______11. A pronoun that asks a question.

______12. A word that describes or limits a noun.

______13. A word that modifies or describes a verb, adjective, or another adverb.

a. abstract noun

b. adjective

c. adverb

d. collective noun

e. common noun

f. interrogative pronoun

g. noun

h. personal pronoun

i. possessive pronoun

j. preposition

k. pronoun

l. proper noun

m. verb

B. List the six basic classifications for parts of speech.

1.

2.

3.

4.

5.

6.

UNIT V

LANGUAGE USAGE

UNIT TEST--PART II

A. Match the term associated with spelling rules to its correct definition by placing the letter in the appropriate space.

_____ 1. Speech sounds represented by a, e, i, o, and u.

_____ 2. Putting the parts of written words into sounds.

_____ 3. The way a certain syllable is stressed in a word.

_____ 4. Something placed before.

_____ 5. A segment or part; the smallest unit of speech or writing.

_____ 6. A speech sound represented by any letter in the alphabet except a, e, i, o and u.

_____ 7. Something placed after.

a. accent

b. consonant

c. prefix

d. pronunciation

e. suffix

f. syllable

g. vowels

B. Identify the statements by placing a "✓" in the spaces that are keys to correct spelling.

_____ 1. Learn to pronounce words correctly.

_____ 2. Use incorrect prefixes.

_____ 3. Make a list of words that give you trouble.

_____ 4. Learn some simple rules for spelling.

_____ 5. Add vowels and do not stress vowels when pronouncing words.

_____ 6. Use some sort of memory device.

_____ 7. Use a dictionary.

C. Apply the spelling rules learned; correct each of the misspelled words below by writing the correct spelling in the spaces provided.

1. changable
2. journeyes
3. decieve
4. runing
5. advantagous
6. completly
7. quizs
8. occurence
9. accomplishs
10. heros
11. policys
12. greive
13. wieght
14. assureance
15. yeild

UNIT V

LANGUAGE USAGE

UNIT TEST--PART III

A. Match the correct terms associated with the use of punctuation marks to the correct definition by placing the letter in the appropriate space.

_____ 1. Words and phrases that provide additional information, clarify information given, or contrast an idea.

_____ 2. A word or group of words that renames the noun that precedes it.

_____ 3. Words or phrases that are not necessary to the meaning of the sentence but help to connect the thoughts in one sentence to another.

_____ 4. Two or more adjectives that modify the same noun.

_____ 5. A group of words that does not contain a subject and a predicate.

_____ 6. A group of words that can stand alone as a sentence.

a. appositive

b. coordinating adjectives

c. independent clause

d. introductory words or phrases

e. parenthetical

f. phrase

B. List the seven (7) purposes of punctuation marks.

1.

2.

3.

4.

5.

6.

7.

8.

C. In the space provided, write the letter of the response that correctly completes the statements regarding the use of punctuation marks.

_____ 1. To separate independent clauses joined by a coordinating conjunction, use

(a) a colon

(b) a semi-colon

(c) a comma

_____ 2. To introduce lists, tabulations, enumerations, etc., use

(a) a comma

(b) a colon

(c) a period

_____ 3. To emphasize a word or group of words, use

(a) parentheses

(b) dashes

(c) quotation marks

_____ 4. Use a _____________ between two clauses that are not joined by a conjunction.

(a) colon

(b) comma

(c) semicolon

_____ 5. To set off an appositive, use

(a) a comma

(b) a colon

(c) a period

_____ 6. Use a ___________________ between independent clauses that are joined by a conjunction if either or both contain internal commas.

(a) semicolon

(b) colon

(c) comma

_____ 7. Use _______________ to enclose material that is supplementary or explanatory.

(a) dashes

(b) commas

(c) parentheses

_____ 8. Use a _______________ to separate an introduction from a long quotation.

(a) comma

(b) colon

(c) semicolon

_____ 9. A _________________ can be used to show omission of words that are easily understood.

(a) period

(b) comma

(c) colon

_____10. A ________________ can be used to indicate an omission of letters and words and to connect combinations of letters and figures.

(a) dash

(b) comma

(c) a period

UNIT V

LANGUAGE USAGE

UNIT TEST--PART IV

A. Identify the true statements regarding the rules for capitalization by placing a "✓" in the correct space.

_____ 1. Always capitalize the first word in every sentence.

_____ 2. Never capitalize proper nouns.

_____ 3. Names of localities and geographic areas are capitalized.

_____ 4. Capitalize the names of months and days of the week.

_____ 5. Capitalize the names of the seasons of the year.

_____ 6. Do not capitalize trade names or generic names.

_____ 7. Titles of high government officials are capitalized.

_____ 8. Capitalize the first letter of every important word in the title of a book.

_____ 9. Capitalize the names of historic events.

B. Indicate whether the number discussed in each of the following items should be expressed as a figure or as a word by placing an F or a W in the appropriate space.

F = Figure W = Word

_____ 1. A number at the beginning of a sentence.

_____ 2. Serial numbers, credit card and social security numbers.

_____ 3. A date that follows the name of a month.

_____ 4. Numbered street names from one through ten.

_____ 5. Numbers above ten.

_____ 6. Numbers in a series of three or more.

_____ 7. Fractions that stand alone.

_____ 8. Fractions that accompany a whole number.

_____ 9. Expression of times that accompany a.m. or p.m.

_____ 10. Dollar amounts.

UNIT V

LANGUAGE USAGE

UNIT TEST--PART V

A. List the four (4) rules to follow when using abbreviations.

1.

2.

3.

4.

B. Identify the items that may be abbreviated by placing a "✓" in the appropriate spaces.

_____ 1. Personal names.

_____ 2. Mister, when it appears in front of a person's name.

_____ 3. A title that is used with both a first and last name.

_____ 4. Academic degrees when it follows a full name.

_____ 5. Names of countries and states when used in sentences.

_____ 6. Names of cities.

_____ 7. Time periods of the day.

_____ 8. Compass points.

_____ 9. Designations of time zones.

_____10. Units of measurement when used in sentences.

UNIT V

LANGUAGE USAGE

UNIT TEST--PART V

A. Match the correct term associated with writing sentences to the correct definition by placing the letter in the correct spaces.

_____ 1. The use of words to express a complete thought.

_____ 2. A group of related words containing a subject and a predicate.

_____ 3. Is often made up of a verb plus a complement.

_____ 4. Anything that limits, qualifies, or adds to another unit of the sentence.

_____ 5. A word that functions as a noun.

_____ 6. A word that gives a name to something that is made up of several persons, objects, or units.

_____ 7. A group of related words that does not contain both a subject and a predicate.

a. clause

b. collective noun

c. modifier

d. phrase

e. predicate

f. sentence

g. subject

B. Name the two types of clauses.

1.

2.

C. List the three types of sentences.

1.

2.

3.

D. Indicate whether the item discussed in each of the following should have a singular or plural verb by placing an SV or PV in the appropriate space.

SV = singular verb PV = plural verb

_____ 1. A singular subject.

_____ 2. A plural subject.

_____ 3. Compound subject joined by and.

_____ 4. Compound subject preceded by each or every.

_____ 5. Singular subjects joined by or.

_____ 6. Noun that is plural in form but singular in meaning.

_____ 7. A sum of money, a quantity, or a number.

_____ 8. A collective noun considered as separate individuals.

E. List the four tips to follow when writing sentences.

1.

2.

3.

4.

UNIT V

LANGUAGE USAGE

ANSWERS TO UNIT TEST

Part I

A. 1. m
2. g
3. e
4. l
5. a
6. d
7. k
8. j
9. h
10. i
11. f
12. b
13. c

B. 1. verb
2. noun
3. pronoun
4. adjective
5. adverb
6. preposition

Part II

A. 1. g
2. d
3. a
4. c
5. f
6. b
7. e

B. 1. ✓
2.
3. ✓
4. ✓
5.
6. ✓
7. ✓

C. 1. changeable
2. journeys
3. deceive
4. running
5. advantageous
6. completely
7. quizzes
8. occurrence
9. accomplishes
10. heroes
11. policies
12. grieve
13. weight
14. assurance
15. yield

Part III

A. 1. e
2. a
3. d
4. b
5. f
6. c

B. 1. To end or terminate a statement.
2. To introduce
3. To enclose
4. To indicate an omission
5. To separate sentence parts
6. To indicate possession
7. To show word division at the end of a line

C. 1. c
2. b
3. b
4. c
5. a
6. a
7. c
8. b
9. b
10. a

Part IV

A. 1. ✓
2.
3.
4. ✓
5.
6.
7. ✓
8. ✓
9. ✓

B. 1. W
2. F
3. F
4. W
5. F
6. F
7. W
8. F
9. F
10. F

Part V

A. 1. Use to save space in such materials as tables, statistical matters, etc.

2. Be consistent.

3. Use a dictionary to check the proper abbreviation of words when in doubt.

4. Use the abbreviation of a word rather than the contraction.

B.
1.
2. ✓
3. ✓
4. ✓
5.
6.
7. ✓
8.
9. ✓
10.

Part VI

A.
1. f
2. a
3. e
4. c
5. g
6. b
7. d

B. 1. Independent clause

2. Dependent clause

C. 1. Simple sentence

2. Compound sentence

3. Complex sentence

D.
1. SV
2. PV
3. PV
4. SV
5. SV
6. SV
7. SV
8. PV

E. 1. Vary the length and complexity of sentences.

2. Use only the words necessary to convey the meaning of the sentence.

3. Write sentences in the active voice.

4. Use words that clearly express the ideas behind the sentence.

UNIT VI

MACHINE TRANSCRIPTION

UNIT OBJECTIVE

After completion of this unit, the student will be able to operate dictation/transcription equipment. This knowledge will be evidenced through demonstration and by successful completion of the unit test.

SPECIFIC OBJECTIVES

After completing this unit of instruction, the student will be able to:

1. Identify features of dictation/transcription equipment.
2. Define terms associated with dictation/transcription equipment.
3. Identify dictation/transcription techniques.
4. Identify the correct steps for dictation.
5. List the five skills required of a transcriptionist.
6. Demonstrate the correct procedures for:
    - a. Using a dictation unit.
    - b. Dictating material.
    - c. Using a transcription unit.
    - d. Transcribing material.

UNIT VI

MACHINE TRANSCRIPTION

NOTES TO THE INSTRUCTOR

I. Preparation for unit

   A. Gather any resources and references necessary to provide additional information to supplement the unit.

   B. Make sure dictation/transcription equipment is available and operating. Have operator's manuals and appropriate tapes readily available.

   C. Obtain brochures and pictures from the list of manufacturers provided.

   D. Design a bulletin board to introduce the unit, such as pictures of equipment, recording media, and brochures.

II. Objective sheet

   A. Discuss the unit and specific objectives.

   B. Add any additional objectives necessary to fully meet the needs of the unit.

III. Information and activity sheets

   A. Discuss the information provided.

   B. Emphasize the procedures for:

      1. Dictating material

      2. Transcribing material

   C. Add information necessary to correspond to any objectives added.

   D. Provide the following:

      1. Material for dictation practice.

      2. Tapes for transcribing practice.

      (NOTE: These materials may be obtained from the list of publishers provided.)

   E. Have students practice dictation/transcription procedures.

IV. Answers to activity sheets

   A. No answers are provided.

   B. Set grading criteria for each activity.

V. Unit test

A. Various approaches may be used in testing:

1. Give the entire test upon completion of the unit.

2. Use the test as an additional activity.

B. Add test parts corresponding to any information areas or sheets added to the unit.

VI. Answers to unit test

VII. Resources and references

A. Books

1. MACHINE TRANSCRIPTION WORD PROCESSING, 1979
William R. Pasewark
South-Western Publishing Co.
5101 Madison Road
Cincinnati, OH 45227

2. TRANSCRIBING TRAINING TECHNIQUES, 1971
Swanner R. Reenstjerna
Vocational Education Media Center
Clemson University
Clemson, SC 29631

3. WORD PROCESSING, 1977
Bearl A. Brooks; et al.
ESP, Inc. Productions
Jonesboro, AR 72401

4. GUIDE TO TRANSCRIPTION, 1978
Reference Manual
Lois E. Frazier/Harry R. Moon
MPC Educational Publisher
3839 White Plains Road
Bronx, NY 10467

5. WORD PROCESSING IN THE MODERN OFFICE, 2nd Ed., 1980
Paula B. Cecil
The Benjamin/Cummings Publishing Co., Inc.
2727 Sand Hill Road
Menlo Park, CA 94025

6. WORD PROCESSING SKILLS AND SIMULATIONS, 1979
Jennie Mason
Bobbs-Merrill Educational Publishing, Co., Inc.
4300 W. 62nd St.
Indianapolis, IN 46268

B. Tapes

1. TRANSCRIPTION SKILLS FOR INFORMATION PROCESSING
   Beverly M. Funk
   Anne E. Schatz
   Gregg/McGraw-Hill
   Princeton Road
   Hightstown, NJ 08520

2. MACHINE TRANSCRIPTION WORD PROCESSING
   William R. Pasewark
   South-Western Publishing Co.

3. MACHINE TRANSCRIPTION PRACTICE
   Western Tape
   P.O. Box 69
   Mountain View, CA 94042

C. Manufacturers

1. IBM
   Office Products Division
   P.O. Box 2068
   Atlanta, GA 30301

2. LANIER BUSINESS PRODUCTS, INC.
   1700 Chantilly Drive, NE
   Atlanta, GA 30324

3. SONY INDUSTRIES
   9 West 57th St.
   New York, NY 10019

4. NORELCO
   Philips Business Systems, Inc.
   810 Woodbury Rd.
   Woodbury, NY 11797

5. DICTAPHONE CORPORATION
   120 Old Post Road
   Rye, NY 10580

MACHINE TRANSCRIPTION

INFORMATION SHEET

I. Terms and definitions

A. Dictation unit--a device into which information can be entered and recorded.

B. Dictator--the person who originates paperwork; a person who dictates "copy" for transcription into final documents.

C. Recording media--magnetic supplies used to record and store information (i.e., floppy disc, magnetic card).

D. Transcribe--to produce a typed document from recorded dictation.

E. Transcription unit--a device used to play back recorded dictation for transcribing.

F. Transcriptionist--the person who produces recorded words into typewritten form.

II. Dictation/transcription equipment

Dictation/transcription equipment is ccategorized by the type of recording media used either discrete or endless loop media.

A. Discrete media equipment--this equipment uses a recording medium which can be removed (i.e., magnetic card, cassette). Discrete media can be removed from the dictation unit and placed in a transcription unit for play back or filed for later use.

1. Types of discrete media equipment.

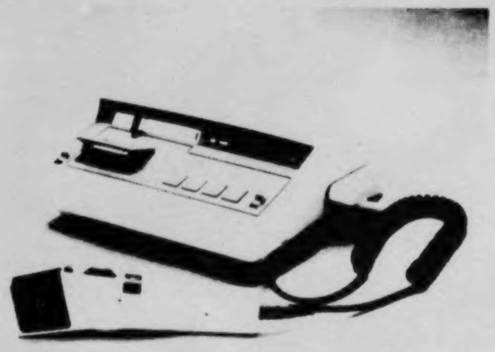
a. Portable dictation unit--a self-contained, hand-held unit which enables the dictator to dictate material outside the office at any time. The recording medium is placed in a transcription unit for the typist to transcribe.

b. Desk-top unit--three styles of desk-top units are available:

(1) a dictation unit

(2) a transcription unit

(3) a combination unit with both dictation/transcription capabilities



Courtesy Lanier Business Products, Inc.

Courtesy Lanier Business Products, Inc.

c. Centralized-recording system--the recording unit is connected either by private wire or by telephone lines to the dictating devices--a microphone or a telephone--which are located a each dictator's desk. The medium is removed from the recording unit and placed in the transcription unit.

d. Transcription unit--used by the transcriptionist to play back material for typing. Each unit consists of a:

(1) listening device (headset)

(2) foot pedal control

(3) playback unit

Courtesy Lanier Business Products, Inc.

III. Advantages and disadvantages of dictation/transcription equipment

A. Advantages

1. Saves time and effort.
2. Gets work processed quickly.
3. Saves money.
4. Increases productivity and efficiency.
5. Makes better use of the dictator and transcriptionist's time.
6. Is the quickest method of capturing information.
7. Is faster and easier to transcribe than longhand and shorthand.
8. Easier to distribute workload.

B. Disadvantages

1. Training time required for the dictator and transcriptionist.
2. Resistance of personnel to use equipment.
3. No immediate contact between dictator and transcriptionist.
4. Difficulty in transcriptionist understanding the dictation.

IV. Dictation Techniques

A. Organize for dictation

1. Make notes.
2. Prepare an outline of points to cover.
3. Gather reference materials.
4. Organize materials to be dictated according to priority.

B. Use index slip or electronic cueing to:

1. Indicate special instructions.
2. Indicate length of each item dictated.

C. Remember the following when dictating:

1. Speak clearly.
2. Do not slur or run words together.

2. Special features of a transcription unit

   a. Speed control device--used to increase or decre[illegible] the speed of the dictation.

   b. Tone control device--used to adjust the pitch of the dictator's voice.

   c. Recall switch--used to automatically replay the last few words of the dictation.

   d. Volume control device--used to control the loudness and softness of the dictation.

   e. Footpedal--used to start and stop dictation and to replay the dictation.

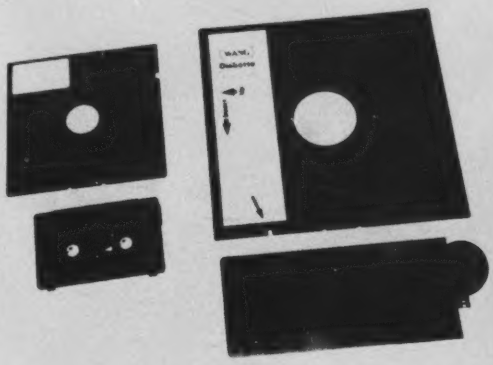
   f. Headset--used to listen to dictation.

3. Types of discrete media

   a. Magnetic cards

   b. Magnetic tape cassettes

   c. Magnetic discs



B. Endless loop system--dictation equipment which uses an endless loop of magnetic tape permanently enclosed in a tank to eliminate handling of the recording medium. The recording unit and the transcription unit are connected either by private wire or telephone lines to the dictating devices--a microphone or a telephone--which are located at each dictator's desk.

3. Speak at an even pace.
4. Dictate capitalization, punctuation, paragraphs, indents, quotation marks, etc.
5. Spell out proper names, confusing names, addresses, etc.

D. Dictate in the following order:

1. Your name or identifying number
2. The item being dictated (letter, memo, etc.).
3. Instructions, such as:
    a. Format
    b. Number of copies
    c. Mailing notations
4. Subject or reference notations
5. Salutation and name of addressee (Dear John or Dear Ms. Smith)
6. Body of material
7. Closing lines
    a. Complimentary closing
    b. Dictator's name and title
    c. Carbon copies, enclosures, etc.

V. Transcribing Skills

A. Listening skills--the ability to pay attention, concentrate, and understand that which is being said.

B. Language arts skills--these include spelling, punctuation, and word usage.

C. Typewriting skills--the ability to rapidly and accurately record on paper whatever material is to be transcribed.

D. Editing skills--the ability to find and correct any errors that occur during dictation and transcription.

E. Logical thinking skills--the ability to determine information that is needed or that has been omitted, and if the message is clear and logical.

VI. Transcribing Techniques

A. Develop a transcribing rhythm by:

1. Listening to a group of words or a phrase, then

2. Stopping the recording and
3. Typing the group of words, then
4. Depressing the foot pedal and listening again.

(NOTE: These steps are repeated throughout the transcription process.)

B. Correct errors as you transcribe so a mailable copy will be produced.

C. Verify confusing items by:

1. Listening closely to the phrases or sentences that do not make sense.
2. Listening to the sentences that precede and follow the confusing items.
3. Consulting the dictator.

D. Proofread the transcript carefully before removing it from the typewriter.

VII. Transcribing Procedures

A. Organize work area and arrange material neatly on the desk. You will need the following items:

1. Transcription unit which includes:
    - a. Playback unit
    - b. Headset
    - c. Foot pedal control
2. Typewriter and supplies which may include:
    - a. Letterhead
    - b. Plain paper
    - c. Envelopes
    - d. Carbon paper
    - e. Correcting utensils
3. Reference books, such as:
    - a. Secretarial handbook
    - b. Operator's manual for transcription unit
    - c. Word division book

    d. Dictionary
    e. Other special references

B. Prepare to transcribe

(NOTE: Refer to the operator's manual for directions on operating the unit.)

1. Check to see that the unit is plugged in and that the headset and foot pedal are plugged in.
2. Place the recording medium in the transcription unit.
3. Turn the unit on.
4. Preview the dictation.
    a. Listen to the first item to be transcribed from beginning to end.
    b. Mentally punctuate the material.
    c. Make notes on the following items:
        (1) spelling of words that need to be checked.
        (2) names that need to be verified.
        (3) indistinguishable words that need to be clarified.
        (4) special instructions.
5. Adjust the volume, speed, and tone controls.
6. Determine the approximate length of the dictation and set the typewriter margins accordingly.
7. Determine the correct format for each item to be prepared.

C. Transcribe the material according to priorities.

D. Proofread the transcript before removing it from the typewriter.

E. Clean up the work area:

1. Turn off the transcription unit and typewriter.
2. Remove the recording medium and file properly.
3. Cover the machine at the end of the day.
4. Store supplies in appropriate places.

UNIT VI

MACHINE TRANSCRIPTION

ACTIVITY SHEET 1--PRACTICING DICTATION TECHNIQUES

Directions: Obtain dictation material and blank tapes from your instructor. Using a dictation unit, dictate the material following the dictation techniques listed in the information sheet.

UNIT VI

MACHINE TRANSCRIPTION

ACTIVITY SHEET 2--PRACTICING TRANSCRIPTION TECHNIQUES

Directions: Obtain transcription tapes from your instructor. Using a transcription unit, transcribe the tapes following the transcribing procedures listed in the information sheet.

UNIT VI

MACHINE TRANSCRIPTION

UNIT TEST

A. Indicate whether the following statements are true or false by circling T or F.

T F 1. Dictation equipment is categorized by the type of recording media used.

T F 2. The tone control is used to adjust the speed of the dictation.

T F 3. Dictation/transcription equipment enables the transcriptionist to work closely with the dictator.

T F 4. Electronic cueing is used to indicate special instructions.

T F 5. A centralized recording system uses an endless loop tank.

T F 6. Discrete media equipment uses a removable recording medium.

T F 7. The headset is used to listen to dictation.

T F 8. A transcription unit is used to record dictation.

T F 9. There are three styles of desk-top units.

T F 10. Punctuation and paragraphs are not dictated.

T F 11. The dictator should possess typewriting skills.

T F 12. Endless loop system has magnetic tape permanently enclosed in a tank.

T F 13. The index slip is used to indicate the length of each item dictated.

B. Match the following terms with their correct definition by placing the letter in the correct space.

____ 1. Transcriptionist
____ 2. Transcription unit
____ 3. Dictator
____ 4. Dictation unit
____ 5. Transcribe
____ 6. Recording media
____ 7. Portable dictation unit
____ 8. Combination unit
____ 9. Listening skills
____10. Speed control
____11. Recall switch

a. A self-contained, hand-held, dictation unit.
b. Used to automatically replay the last few words of dictation.
c. The person who originates the paperwork.
d. Has both dictation/transcription capabilities.
e. The ability to pay attention, concentrate, and understand what is being said.
f. A device into which information can be entered.
g. Used to increase or decrease speed of dictation.
h. The person who produces recorded words into typewritten form.
i. A device used to play back recorded dictation for transcription.
j. To produce a typed document from recorded dictation.
k. Magnetic supplies used to record and store information.

C. Identify dictation techniques and transcribing techniques and procedures by placing a D for dictation techniques and a T for transcribing techniques and procedures in the appropriate space.

____ 1. Organize work area and arrange material.
____ 2. Identify by name or number.
____ 3. Indicate special instructions.
____ 4. Indicate special instructions.
____ 5. Use reference books.
____ 6. Proofread.
____ 7. Speak clearly.
____ 8. Listen carefully.
____ 9. Make notes regarding spelling of words and special instructions.
____10. Indicate type of item being dictated.

D. Number the following steps for dictation in correct order in which they should be performed.

_____ Subject or reference notations.

_____ Closing lines.

_____ Your name or identifying number.

_____ Body of material.

_____ Instructions.

_____ Type of item being dictated

_____ Solution.

E. List the five skills required of a transcriptionist.

1.

2.

3.

4.

5.

UNIT VI

MACHINE TRANSCRIPTION

ANSWERS TO UNIT TEST

A.
1. T
2. F
3. F
4. T
5. F
6. T
7. T
8. F
9. T
10. F
11. F
12. T
13. T

B.
1. h
2. i
3. c
4. f
5. j
6. k
7. a
8. d
9. e
10. g
11. b

C.
1. T or D
2. D
3. D
4. T
5. T
6. T
7. D
8. T
9. D or T
10. D

D.
4 Subject or reference notations
7 Closing lines
1 Your name or identifying number
6 Body of material
3 Instructions
2 Type of item being dictated
5 Salutation

E.
1. Listening skills
2. Language arts skills
3. Typewriting skills
4. Editing skills
5. Logical thinking skills

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

UNIT OBJECTIVE

After completing this unit, the student will be able to add, subtract, multiply, and divide whole numbers, fractions, and numbers containing decimals. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completing this unit of instruction, the student will be able to:

1. Match the terms with their definitions.
2. Identify true statements pertaining to adding, subtracting, multiplying, and dividing whole numbers.
3. Complete the statements regarding decimals and fractions.
4. Describe how percents are changed to fractions.
5. State the procedures for changing fractions to percents.
6. Explain how to change percents to decimals and decimals to percents.
7. List the steps for finding a percent of a given number.
8. Cite the procedures for finding an amount when the percent of it is given.
9. State the steps for finding the percent of decrease or increase.
10. To demonstrate the ability to:
    a. Add, subtract, multiply and divide whole numbers, numbers with decimals, fractions, and percents.
    b. Work with fractions, decimals, and percentages.
    c. Round off numbers.

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

NOTES TO THE INSTRUCTOR

I. Objective sheet

   A. Discuss the unit and specific objectives with the student.

   B. Add any objectives necessary to fully meet the needs of the unit and the students.

II. Information and activity sheets

   A. Information Sheet 1--TERMS AND DEFINITIONS

      1. Discuss the terms and definitions.

      2. Illustrate the discussion using the chalk board or an overhead projector.

      3. Have students complete Activity Sheet 1--TERMS AND DEFINITIONS.

   B. Information Sheet 2--WORKING WITH WHOLE NUMBERS

      1. Discuss the procedures for adding, subtracting, multiplying, and dividing whole numbers.

      2. Demonstrate each of the procedures.

      3. Have students complete Activity Sheet 2--WORKING WITH WHOLE NUMBERS.

   C. Information Sheet 3--WORKING WITH DECIMALS

      1. Explain the procedures for working with decimals. Demonstrate the procedures as they are discussed.

      2. Give examples for each of the procedures.

      3. Have students complete Activity Sheet 3--WORKING WITH DECIMALS.

   D. Information Sheet 4--WORKING WITH FRACTIONS

      1. Discuss the procedures and demonstrate with examples.

      2. Have students complete Activity Sheet 4--WORKING WITH FRACTIONS.

E. Information Sheet 5--COMPUTING PERCENTAGES

1. Explain the procedures for working with percents and computing percentages.

2. Demonstrate each procedure as it is being discussed.

3. Have students complete Activity Sheet 5--COMPUTING PERCENTAGES.

III. Answers to activity sheets

A. Assign value of activities.

B. Add answers for any activities added to the unit.

IV. Unit test

A. Covers the information presented in the information sheets.

B. Various methods of administering the test may be used:

1. Use as an additional activity.

2. Administer the test upon completion of the unit.

3. Use as a daily quiz upon completion of the information.

C. Add test parts that correspond to any information added to the unit.

V. Answers to unit test

A. Assign point values to the test.

B. Add answers for any questions included in the test.

VI. Resources and References

A. MATHEMATICS FOR THE CONSUMER, 2nd ed.
Roswell E. Fairbank
South-Western Publishing Co.
5101 Madison Rd.
Cincinnati, OH 45227

B. APPLIED BUSINESS MATHEMATICS, 11 ed.
Fairbanks and Schulthesis
South-Western Publishing Co.
5101 Madison Rd.
Cincinnati, OH 45227

C. ARITHMETIC SKILLS WORKBOOK
Calman Goozner
AMSCO School Publications, Inc.
315 Hudson Street
New York, NY 10013

D. PROGRAMMED BUSINESS MATHEMATICS, 3rd ed.
Harry Huffman
McGraw-Hill Book Company
Princeton Rd.
Highstown, NJ 08520

E. BUSINESS MATH/30
Robert Rosenberg
McGraw-Hill Book Company
Princeton Rd.
Highstown, NJ 08520

F. CONSUMER MATHEMATICS
Linda L. Thompson
Glencoe Publishing Co.
17337 Ventura Blvd.
Encino, CA 91316

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

INFORMATION SHEET 1--TERMS AND DEFINITIONS

I. Addition--Combining the values of two or more numbers to form a larger number.

   A. Addend--The numbers added together.

   B. Sum--The total or answer that results from adding the numbers together.

$$\begin{array}{rl} 30 & \rbrace\ \text{addend} \\ \underline{+\ 5} & \\ 35 & \text{sum} \end{array}$$

II. Subtraction--The process of taking a smaller number away from a larger number.

   A. Minuend--The larger number in the subtraction problem.

   B. Subtrahend--The smaller number that is subtracted from the minuend.

   C. Difference--The answer that results from the subtraction.

$$\begin{array}{rl} 30 & \text{minuend} \\ \underline{-\ 5} & \text{subtrahend} \\ 25 & \text{difference} \end{array}$$

III. Multiplication--The process of adding groups of numbers a specified number of times.

   A. Multiplicand--The number being multiplied, usually the top or first number.

   B. Multiplier--The number by which you multiply, usually the bottom or second number.

   C. Product--The answer to the computation.

$$\begin{array}{rl} 30 & \text{multiplicand} \\ \underline{\times\ 6} & \text{multiplier} \\ 180 & \text{product} \end{array}$$

IV. Division--The process of breaking any number into smaller groups of numbers.

   A. Dividend--The number being divided.

   B. Divisor--The number by which you divide.

   C. Quotient--The answer obtained by dividing.

   D. Remainder--The amount left over if the quotient is not a whole number.

divisor quotient

$$26 \div 4 = 6\frac{1}{2}$$

dividend remainder

V. Fraction--A part of a unit or a number.

A. Numerator--The top number that indicates how many parts are represented.

B. Denominator--The bottom number that indicates how many equal parts has been divided.

fraction bar → $\frac{1}{2}$ $\leftarrow$ numerator, $\leftarrow$ denominator

C. Fraction bar--A line that separates the numerator and the denominator.

D. Types of fractions

1. Proper fraction--The numerator is smaller than the denominator.
2. Improper fraction--The numerator is as large or greater than the denominator such as $\frac{50}{3}$.
3. Mixed number--Composed of a whole number and a fraction such as $2\frac{1}{2}$.
4. Complex fraction--Contains a fraction in the numerator and/or the denominator, such as $\frac{\frac{1}{4}}{6}$ or $\frac{\frac{1}{5}}{\frac{1}{6}}$.
5. Equivalent fractions--Fractions with the same value, $\frac{1}{2}$ and $\frac{4}{8}$.
6. Higher equivalent--The fraction with the larger numerator and denominator $\frac{4}{8}$.

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ACTIVITY SHEET 1--TERMS AND DEFINITIONS

DIRECTIONS: Select the answers which correctly completes the statements below regarding terms and definitions used in math transactions. Place the correct letter in the blank space by the number.

_____1. The process of combining the values of two or more numbers to form a larger number is called:

a. multiplication
b. addition
c. division

_____2. The process of taking a smaller number away from a larger number is called:

a. multiplication
b. division
c. subtraction

_____3. The numbers added together are called:

a. minuend
b. addend
c. sum

_____4. The total or answer that results from adding numbers together is called:

a. sum
b. product
c. minuend

_____5. The larger number in a subtraction problem is called:

a. subtrahend
b. minuend
c. quotient

_____6. The smaller number that is subtracted from the larger number is called:

a. subtrahend
b. minuend
c. quotient

_____7. The answer that results from the subtraction is called:

a. sum
b. difference
c. product

_____8. The process of adding groups of numbers a specified number of times is called:

a. addition
b. division
c. multiplication

_____9. The number being multiplied, usually the top or first number, is called:

a. multiplicand
b. multiplier
c. product

____10. The answer to the multiplying of numbers is called:

a. multiplicand
b. multiplier
c. product

____11. The number by which you multiply a number is called:

a. multiplicand
b. multiplier
c. product

____12. The process of breaking any number into small groups of numbers is called:

a. sum
b. division
c. subtraction

____13. The number being divided is called:

a. minuend
b. quotient
c. dividend

____14. The number by which you divide is called:

a. dividend
b. divisor
c. quotient

____15. The answer obtained by dividing is called:

a. quotient

b. product

c. dividend

____16. The numerator is the ______________ that indicates how many parts are represented.

a. top number

b. line

c. bottom number

____17. The denominator is the _____________ that indicates how many equal parts has been divided.

a. top number

b. mixed number

c. bottom number

____18. A proper fraction has a numerator ______________ than the denominator.

a. larger

b. equal

c. smaller

____19. An improper fraction has a numerator ____________than the denominator.

a. larger

b. equal

c. smaller

____20. A mixed fraction is composed of

a. fractions

b. whole numbers

c. a whole number and a fraction

____21. A complex fraction contains a fraction in the____________.

a. numerator

b. denominator

c. both the numerator and/or the denominator

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

INFORMATION SHEET 2--WORKING WITH WHOLE NUMBERS

I. Addition

A. Line up digits correctly.

B. Add from bottom to top, right to left.

C. Check the answer by adding from top to bottom.

$$\begin{array}{r} 235 \\ 30 \\ 1 \\ +\ 20 \\ \hline 286 \end{array}$$

II. Subtraction

A. Line up digits correctly.

B. Place the larger number above the smaller number.

$$\begin{array}{rl} 225 & \text{minuend} \\ -\ 25 & \text{subtrahend} \\ \hline 200 & \text{difference} \end{array}$$

C. Subtract the smaller number from the larger number.

D. Subtract from right to left.

E. Check the answer.

1. Adding the difference (answer) to the subtrahend (number above).

2. The sum should equal the minuend (top number).

$$\begin{array}{rl} 25 & \text{subtrahend} \\ +200 & \text{difference} \\ \hline 225 & \text{minuend} \end{array}$$

III. Multiplication

A. Line up digits correctly.

B. Multiply from right to left.

C. Multiply the multiplicand (top number) by every digit in the multiplier (bottom number).

$$\begin{array}{rl} 125 & \text{multiplicand} \\ \times\ 15 & \text{multiplier} \\ \hline 625 & \\ 125 & \\ \hline 1875 & \text{product} \end{array}$$

(NOTE: Any number multiplied by 0 equals 0. Use the 0 as a place holder in the answers).

$$\begin{array}{r} 235 \\ \times\ 10 \\ \hline 2350 \end{array}$$

D. Add the answer to get the product.

320

IV. Division

A. Divide the divisor into the dividend.

B. Divide from left to right.

C. Check the answer by multiplying the quotient by the divisor.

```
     125
  2) 250
     2
      50        125
      40      x   2
      10        250
      10
       0
```

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ACTIVITY SHEET 2--WORKING WITH WHOLE NUMBERS

Directions: Complete the following problems relating to whole numbers. (NOTE: Do not use a calculator).

A. Add and check your answers.

1. 1,248
623
+ 124
47

2. 213 + 74 + 6 =

3. 461 + 62 + 7 =

4. 316
+ 45

5. 126
+ 457

6. 7,685
1,209
455
+ 75
90

7. 162 + 78 =

8. 661 + 45 + 3 =

9. 6,413 + 4,734 + 329 + 56 + 2 =

10. 518,208
57,381
8,601
+ 234
60

B. Subtract and check your answers.

1. 56
- 37

2. 60
- 56

3. 515
- 61

4. 700
- 245

5. 2,514
- 635

6. 3,025
- 2,437

7. 14,321
- 7,072

8. 231,526
- 142,738

9. 15,235,213
- 14,478,425

10. 453,748
- 264,950

C. Multiply

1. 64 x 3
2. 78 x 27
3. 826 x 83
4. 605 x 70
5. 4,030 x 37
6. 7,007 x 43
7. 30 x 6
8. 307,500 x 569
9. 403 x 305
10. 35,030 x 2,300

D. Divide and check your answers. (Show remainders in fractions.)

1. $2\overline{)404}$
2. $6\overline{)84,324}$
3. $15\overline{)30}$
4. $32\overline{)6,514}$
5. $35\overline{)10,570}$
6. $32\overline{)529,376}$
7. $17\overline{)9,016}$
8. $25\overline{)38,150}$
9. $250\overline{)636,500}$
10. $360\overline{)3,600}$

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

INFORMATION SHEET 3--WORKING WITH DECIMALS

I. Addition

- A. Line up decimals and digits correctly, one under the other.
- B. Add numbers together, starting from right to left.
- C. Place the decimal point in the answer.

$$\begin{array}{r} 2.5 \\ 16.15 \\ 1.0 \\ +\ \ .256 \\ \hline 19.906 \end{array}$$

II. Subtraction

- A. Line up decimals and digits correctly, one under the other.
- B. Subtract the numbers, starting from right to left.
- C. Place the decimal point in the answer.

$$\begin{array}{r} 21.25 \\ -15.05 \\ \hline 6.20 \end{array}$$

III. Multiplication

- A. Multiply numbers in problem.

$$\begin{array}{r} 1.25 \\ \times .05 \\ \hline 625 \end{array}$$

- B. Count number of decimal places to the right of the decimal point(s) in the minuend and multiplier.
- C. Move from right to left in the answer and count as many decimal places in the answer as there are in the problem.

$$\begin{array}{rl} 1.25 & 2 \text{ decimal places} \\ \times\ .05 & \underline{2} \text{ decimal places} \\ \cline{1-1} \overleftarrow{.625} & 4 \end{array}$$

- D. Insert the decimal point

$$\begin{array}{r} 1.25 \\ \times .05 \\ \hline .0625 \end{array}$$

(NOTE: Add zeros in the answer if necessary).

$$\begin{array}{r} .05 \\ \times\ .5 \\ \hline \overleftarrow{.025} \end{array}$$

IV. Division

- A. Decimal in the dividend only.

$$5\overline{)2.5}$$

  1. Place the decimal point in the quotient directly above the decimal in the dividend.

$$\begin{array}{r} . \ \ \\ 5\overline{)2.5} \end{array}$$

  2. Divide the numbers.

$$\begin{array}{r} 5 \\ 5\overline{)2.5} \\ 2\ 5 \\ \hline 0 \end{array}$$

B. Decimal in the divisor.

1. Move the decimal point in the divisor to the right until it is outside the number.

   2.5)1625

2. Move the decimal point in the dividend to the right the same number of places.

   2.5)1625.0

   (NOTE: There is a decimal point at the end of the last digit in a whole number).

3. Place a zero in the empty space if there is one.

4. Divide and place the decimal point in the quotient directly above the decimal in the dividend.

```
       650.
2.5)16250.
    150
     125
     125
       0
```

V. Rounding off Numbers.

1. Raise the digit you are rounding by 1 <u>if</u> the digit to the right of it is between <u>5</u> and <u>9</u>. — 1.587 = 1.59

2. Do not change the digit if the digit to the right of it is between <u>0</u> and <u>4</u>. — 1.234 = 1.23

COMPUTING ROUTINE MATH TRANSACTIONS

ACTIVITY SHEET 3--WORKING WITH DECIMALS

Directions: Complete the following problems relating to whole numbers. (NOTE: Round off dollar amounts to the nearest penny).

A. Add the following.

1. 3.1 + .164 + 11.01 =
2. 214.25 + 1.25 + .05 + .125 =
3. 224.572 + 341 + 1.2789 =
4. 3.99 + 18.06 + 6.0728 =
5. 1.5 + 12.08 + .0007 =

B. Subtract

1. 3.26 - 1.57 =
2. .032 - .005 =
3. 35.051 - 10.556 =
4. 21.5 - 12.621 =
5. 27.021 - 13.03 =

C. Multiply

(NOTE: Round off to the nearest penny.)

1. 1262 x 1.4
2. $610.33 x .215
3. 21.05 x .07
4. $1,275.26 x .46
5. $25.72 x .045

D. Dividing

1. $25\overline{)50.25}$

2. $20\overline{)\$168.50}$

3. $5.25\overline{)625.5}$

4. $.064\overline{)426.4}$

5. $15\overline{)\$130.52}$

6. $15\overline{)9}$

7. $15\overline{)\$2}$

8. $60\overline{)\$536.41}$

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

INFORMATION SHEET 4--WORKING WITH FRACTIONS

I. Reducing fractions to lowest terms.

A. Use the largest single number that will divide into both the numerator and the denominator an even number of times.

$$6\,\frac{\cancel{6}^{1}}{\cancel{12}_{2}} = \frac{\cancel{6}}{\cancel{12}} = \frac{1}{2}$$

B. Divide this number into the numerator and the denominator.

C. If the fraction is composed of large numbers, follow these steps in determining the number to use in reducing the fraction:

$$\frac{48}{64}$$

1. Divide the numerator into the denominator.

$$\begin{array}{r} 1 \\ 48\overline{)64} \\ \underline{48} \\ 16 \end{array}$$

2. Then divide the remainder into the original divisor (the numerator).

$$\begin{array}{r} 3 \\ 16\overline{)48} \\ \underline{48} \\ 0 \end{array}$$

3. Continue until there is no remainder.

4. Use the last divisor as the number to divide into the numerator and denominator to reduce the fraction.

$$\begin{array}{r|l} 16 & \cancel{48} \\ 16 & \cancel{64} \end{array} = \frac{3}{4}$$

(NOTE: Eliminate the zeros when reducing fractions).

$$\frac{10}{100} = \frac{1\cancel{0}}{10\cancel{0}} = \frac{1}{10}$$

II. Raising fractions to higher equivalents.

A. Multiply the numerator and denominator by the same number.

$$\frac{1}{2} = \frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$$

B. If there is a denominator given, follow these steps:

Raise $\frac{7}{15}$ to 30ths

1. Divide the denominator of the fraction (15) into the given denominator (30).

$$\begin{array}{r} 2 \\ 15\overline{)\ 30} \end{array}$$

2. Multiply the numerator of the fraction (7) by the answer in step 1 (2).

$7 \times 2 = 14$

3. Write the answer to step 2(14) over the given denominator (30). This is the higher equivalent.

$$\frac{14}{30}$$

III. Comparing fractions for highest value.

A. Change the fractions to equivalent fractions that have the same denominator.

B. Compare the numerator. The one with the largest numerator has the largest value.

Which fraction is larger?

$\frac{5}{9}$ or $\frac{13}{18}$

$\frac{5}{9} = \frac{10}{18}$

$\frac{10}{18}$ or $\frac{13}{18}$ $\frac{13}{18}$ is larger.

IV. Changing improper fractions and mixed numbers.

A. To change improper fractions to mixed numbers, divide the numerator by the denominator.

$\frac{57}{12} =$

$$\begin{array}{r} 4\,\frac{3}{4} \\ 12\overline{)57} \\ \underline{48} \\ 9 \\ \overline{12} \end{array}$$

$\frac{57}{12} = 4\,\frac{3}{4}$

B. To change mixed numbers to improper fractions:

$2\,\frac{3}{4}$

1. Multiply the denominator by the whole number. $2 \times 4 = 8$
2. Add the numerator. $8 + 3 = 11$
3. Write the numerator over the denominator. $\frac{11}{4}$

V. Adding fractions

A. With the same denominator.

$\frac{4}{11} + \frac{5}{11} =$

1. Add the numerators.
2. Write the sum of the numerators over the denominator. $4 + 5 = 9$ $\frac{9}{11}$

B. With an improper fraction as the sum.

$\frac{3}{5} + \frac{3}{5} =$

1. Add the numerators. $3 + 3 = 6$
2. Write the sum of the numerators over the denominator. $\frac{6}{5}$
3. Change the improper fraction to a mixed number. $5\overline{)6} = 1\,\frac{1}{5}$

C. With different denominators.

$\frac{1}{2} + \frac{2}{3} + \frac{3}{4} =$

1. Find the smallest common (same) denominator into which all the unlike denominators will divide. 12 common denominator

2. Divide each unlike denominator into the common denominator. $\begin{array}{r}6\\2\overline{)12}\end{array}$ $\begin{array}{r}4\\3\overline{)12}\end{array}$ $\begin{array}{r}3\\4\overline{)12}\end{array}$

3. Multiply each answer by their respective numerator.

$$\frac{1}{2} \times 6 = 6$$

$$\frac{2}{3} \times 4 = 8$$

$$\frac{3}{4} \times 3 = 9$$

New Numerators

4. Place the new numerators over the common denominator. $\frac{6}{12} + \frac{8}{12} + \frac{9}{12}$ Equivalent Fractions

5. Add the top numbers (numerators).

$$\begin{array}{r}\frac{6}{12}\\ +\frac{8}{12}\\ +\frac{9}{12}\\ \hline \frac{23}{12}\end{array}$$

answer an improper fraction

6. Change the improper fraction to a mixed number. $\frac{23}{12} = 1\ \frac{11}{12}$ answer in mixed number

D. With mixed numbers

1. Add the whole numbers
2. Add the fractions
    a. Change unlike denominators to a common denominator.
    b. Change improper fraction to mixed numbers.

$$\begin{array}{rrcr} & 8\ \frac{3}{4} & = & \frac{6}{8}\\ + & 5\ \frac{3}{8} & = & \frac{3}{8}\\ + & 4\ \frac{1}{2} & & \frac{4}{8}\\ \hline & 17 & & \frac{13}{8}\end{array}$$

$$\frac{13}{8} = 1\ \frac{5}{8}$$

3. Combine the two answers for a final total. $17 + 1\ \frac{5}{8} = 18\ \frac{5}{8}$ answer

VI. Subtracting fractions

A. With unlike denominators

1. Arrange fractions one under another.

$$\begin{array}{r}\frac{2}{3}\\ -\frac{3}{5}\\ \hline\end{array}$$

2. Find the common denominator.
3. Subtract the numerators.
4. Place the answer over the common denominator.

$$\begin{array}{rcr}\frac{2}{3} & = & \frac{10}{15}\\ -\frac{3}{5} & = & \frac{9}{15}\\ \hline & & \frac{1}{15}\end{array}$$

B. With mixed numbers

1. Arrange mixed numbers one under another.

$$\begin{array}{r} 13\frac{2}{3} \\ -\ 6\frac{3}{8} \\ \hline \end{array}$$

2. Determine the common denominators (24).

3. Subtract the fractions first, then subtract the whole numbers.

$$\begin{array}{r} 13\frac{16}{24} \\ -\ 6\frac{9}{24} \\ \hline 7\frac{7}{24} \end{array}$$

(NOTE: If the fraction in the subtrahend is larger than the fraction in the minuend, borrow one (1) from the whole number in the minuend (7) and add to the fraction ($1\frac{4}{20}$).
Change the mixed fraction ($1\frac{4}{20}$) to an improper fraction ($\frac{24}{20}$) and subtract.)

$$\begin{array}{rcr} 7\frac{1}{5} & = & \overset{6}{\cancel{7}}\frac{4}{20} \\ -3\frac{3}{4} & = & 3\frac{15}{20} \\ \hline \end{array}$$

$$\begin{array}{r} 6\frac{24}{20} \\ -3\frac{15}{20} \\ \hline 3\frac{9}{20} \end{array} \quad \left(1\frac{4}{20} = \frac{24}{20}\right)$$

VII. Multiplying

A. Common fractions

$\frac{1}{5} \times \frac{2}{3} =$

1. Multiply the numerators.

$\frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$

2. Multiply the denominators

(NOTE: If possible, cancel cross factors before multiplying numerators and denominators.)

$\frac{2}{5} \times \frac{5}{8} = \frac{\overset{1}{\cancel{2}}}{\underset{1}{\cancel{5}}} \times \frac{\overset{1}{\cancel{5}}}{\underset{4}{\cancel{8}}} = \frac{1}{4}$

3. Reduce product to its lowest terms.

B. Mixed numbers and whole numbers

$2 \times 3\frac{1}{3} =$

1. Change the mixed numbers and the whole numbers to improper fractions.

$\frac{2}{1} \times \frac{10}{3} = \frac{20}{3} = 6\frac{2}{3}$

(NOTE: Cancel cross factors, if possible.)

$1\frac{1}{4} \times 2\frac{2}{3} = \frac{5}{4} \times \frac{8}{3} =$

$\frac{5}{\cancel{4}} \times \frac{\overset{2}{\cancel{8}}}{3} = \frac{10}{3} = 3\frac{1}{3}$

2. Multiply across.

3. Change product to mixed numbers.

VIII. Dividing

A. Common fractions

$$\frac{1}{3} \div \frac{1}{6} =$$

1. Change the ÷ symbol to an x symbol and invert the divisor.

$$\frac{1}{3} \times \frac{6}{1}$$

2. Multiply.

   (NOTE: Cancel cross factors if possible.)

$$\frac{1}{\underset{1}{\cancel{3}}} \times \frac{\overset{2}{\cancel{6}}}{1} = 2$$

B. Mixed and whole numbers

$$3 \div 5\,\frac{1}{4} =$$

1. Change whole and mixed numbers to improper fractions.

$$\frac{3}{1} \div \frac{21}{4} =$$

2. Change the ÷ symbol to an x symbol and invert the divisor.

$$\frac{3}{1} \times \frac{4}{21} =$$

3. Multiply.

   (NOTE: Cancel cross factors if possible.)

$$\frac{\overset{1}{\cancel{3}}}{1} \times \frac{4}{\underset{7}{\cancel{21}}} = \frac{4}{7}$$

IX. Simplifying complex fractions

A. Rewrite the fraction as a division problem.

$$\frac{\frac{1}{4}}{\frac{3}{8}} = \frac{1}{4} \div \frac{3}{8} =$$

B. Change the ÷ symbol to an x symbol and invert the divisor.

$$\frac{1}{4} \times \frac{8}{3} =$$

C. Multiply.

   (NOTE: Cancel cross factors if possible.)

$$\frac{1}{\underset{1}{\cancel{4}}} \times \frac{\overset{2}{\cancel{8}}}{3} = \frac{2}{3}$$

X. Changing fractions to decimals

A. Common fractions

$$\frac{1}{4}$$

1. Divide the numerator by the denominator.
2. Insert the decimal.

$$\frac{1}{4} = \begin{array}{r} .25 \\ 4\overline{)1.00} \\ \underline{8} \\ 20 \\ \underline{20} \end{array} \qquad \frac{1}{4} = .25$$

B. Mixed numbers

$$2\,\frac{1}{4}$$

1. Change the fraction to a decimal.
2. Insert the decimal.

$$2\,\frac{1}{4} = \begin{array}{r} .25 \\ 4\overline{)1.00} \\ \underline{8} \\ 20 \\ \underline{20} \end{array} = 2.25$$

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ACTIVITY SHEET 4--WORKING WITH FRACTIONS

Directions: Complete the following problems relating to fractions.

A. Reducing fractions to lowest terms.

1. $\frac{10}{30} =$ 2. $\frac{20}{60} =$ 3. $\frac{42}{70} =$ 4. $\frac{35}{70} =$

5. $\frac{48}{144} =$ 6. $\frac{150}{360} =$ 7. $\frac{105}{225} =$ 8. $\frac{144}{228} =$

9. $\frac{10}{15} =$ 10. $\frac{8}{16} =$

B. Raising fractions to higher equivalents.

1. $\frac{20}{32}$ to 64ths 2. $\frac{1}{2}$ to 4ths 3. $\frac{5}{10}$ to 50ths

4. $\frac{15}{28}$ to 56ths 5. $\frac{7}{24}$ to 48ths

C. Changing improper fractions to mixed numbers.

1. $\frac{20}{3} =$ 2. $\frac{18}{2} =$ 3. $\frac{32}{7} =$

4. $\frac{41}{6} =$ 5. $\frac{17}{15} =$

D. Changing mixed numbers to improper fractions.

1. $4\frac{1}{4} =$ 2. $14\frac{3}{4} =$ 3. $10\frac{1}{2} =$

4. $4\frac{5}{12} =$ 5. $1\frac{1}{3} =$

E. Adding fractions.

1. $\frac{8}{15} + \frac{7}{15} + \frac{6}{15} =$
2. $\frac{1}{4} + \frac{1}{4} =$
3. $\frac{1}{3} + \frac{1}{6} + \frac{1}{2} =$
4. $\frac{5}{8} + \frac{3}{16} + \frac{21}{32} =$
5. $5\ \frac{1}{2} + 4\ \frac{3}{4} + 1\ \frac{4}{5} =$
6. $3\ \frac{5}{16} + 10\ \frac{21}{64} + 15\ \frac{3}{4} =$
7. $\frac{1}{5} + \frac{2}{15} + \frac{10}{30} =$
8. $1\ \frac{1}{2} + 2\ \frac{1}{2} =$
9. $16\ \frac{2}{3} + 4\ \frac{1}{15} + 20\ \frac{5}{45} =$
10. $\frac{1}{6} + \frac{25}{60} + \frac{1}{30} =$

F. Subtracting fractions.

1. $\frac{2}{3} - \frac{1}{3}$
2. $\frac{5}{6} - \frac{1}{12}$
3. $\frac{4}{5} - \frac{4}{6}$
4. $15\ \frac{1}{3} - 7\ \frac{1}{4}$
5. $19 - 6\ \frac{3}{8}$
6. $10\ \frac{4}{5} - 5\frac{8}{35}$
7. $\frac{7}{16} - \frac{3}{8}$
8. $15\ \frac{3}{7} - 5\ \frac{5}{6}$

9. $\begin{array}{r} \frac{1}{2} \\ - \frac{1}{4} \\ \hline \end{array}$

10. $\begin{array}{r} 20\frac{3}{8} \\ - 10\frac{3}{5} \\ \hline \end{array}$

G. Multiplying fractions.

1. $\frac{1}{5} \times \frac{3}{4} =$
2. $\frac{1}{2} \times \frac{1}{4} =$
3. $\frac{6}{21} \times \frac{7}{24} =$
4. $\frac{3}{4} \times \frac{4}{7} \times \frac{1}{6} =$
5. $2\frac{1}{3} \times 3\frac{1}{4} =$
6. $359 \times 21\frac{1}{5} =$
7. $\frac{2}{3} \times \frac{3}{10} =$
8. $470 \times 37\frac{4}{5} =$
9. $5\frac{1}{3} \times 4 =$
10. $10\frac{2}{5} \times 3\frac{1}{3} =$

H. Dividing fractions.

1. $\frac{3}{4} \div \frac{3}{4} =$
2. $3\frac{3}{5} \div 6 =$
3. $2\frac{2}{3} \div 1\frac{3}{5} =$
4. $\frac{5}{32} \div \frac{5}{16} =$
5. $8 \div \frac{3}{4} =$
6. $5 \div 5\frac{5}{8} =$

I. Simplifying complex fractions.

1. $\dfrac{\frac{1}{2}}{\frac{3}{4}} =$

2. $\dfrac{\frac{1}{5}}{5} =$

3. $\dfrac{\frac{3}{5}}{\frac{1}{15}} =$

4. $\dfrac{12\frac{1}{2}}{100} =$

5. $\dfrac{\frac{3}{5}}{4\frac{1}{3}} =$

J. Changing fractions to decimals.

1. $\frac{1}{4} =$

2. $\frac{1}{5} =$

3. $\frac{1}{25} =$

4. $\frac{2}{10} =$

5. $\frac{15}{24} =$

6. $\frac{12}{15} =$

7. $54.2 \div 3\frac{4}{5} =$

8. $847 \times 25\frac{2}{5} =$

9. $\frac{48}{72} =$

10. $\frac{15}{45} =$

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

INFORMATION SHEET 5--COMPUTING PERCENTAGES

I. Changing percents to decimals — 2%

A. Move the decimal two places to the left. — .02 = .02

(NOTE: The decimal is understood to be at the right of a whole number.)

B. Drop the percent sign.

II. Changing decimals to percents — 2.25

A. Move the decimal two places to the right. — 2.25

B. Add the percent sign. — 225%

III. Changing percents to fractions — 25%

A. Write the percent as a fraction with a denominator of 100. — $\frac{25}{100}$

B. Reduce to the lowest term. — $\frac{25}{100} = \frac{1}{4}$

IV. Changing fractions to percents

A. Divide the numerator by the denominator.

B. Carry the answer to three places.

$$\frac{3}{8} = \begin{array}{r} .375 \\ 8\overline{)3.000} \\ \underline{2\,4} \\ 60 \\ \underline{56} \\ 40 \\ \underline{40} \end{array}$$

C. Change the decimal answer to a percent. — .375= 37.5%

V. Finding a percent of a given amount

A. Change the percent to a decimal.

B. Multiply the given amount by the decimal amount.

EXAMPLE 1: Find the amount of the commission on sales of $1,080 if the commission is 5%.

1. 5% = .05

2. $$\begin{array}{r} \$1,080 \\ \underline{\times\ .05} \\ \$54.00 \end{array}$$ Commission

EXAMPLE 2: Find the number of apples sold if 100 apples were purchased and 80% of them were sold.

1. 80% = .80

2. $$\begin{array}{r} 100 \\ \underline{\times\ .80} \\ 80.\cancel{00} \end{array}$$ apples were sold

VI. Finding an amount when the percent of it is given.

A. Change the percent to a decimal.

B. Divide the given amount by the decimal amount.

EXAMPLE If a dress is reduced by 25% to sell for $20, what was the original price?

1. 25% - .25

$$\begin{array}{r} \$80 \\ 2.\quad .25\overline{)\,20.00} \end{array}$$

3. $80 original price

VII. Finding the percent of decrease or increase.

A. To find the amount of decrease

1. Subtract the new figure from the original figure.

2. Write as a fraction.

   a. The amount of decrease as the numerator.

   b. The original figure as the denominator.

3. Change the fraction to a percent.

EXAMPLE: A dress selling for $80 was reduced to $20. What is the percent of the decrease?

$$1.\quad \begin{array}{r} \$80 \\ -\ 20 \\ \hline \$60 \end{array}$$

2. 60/80 = 3/4

$$3.\quad \begin{array}{r} .75 \\ 4\overline{)\,3.00} \\ 2\,8 \\ \hline 20 \\ 20 \end{array}$$

4. .75 = 75%, percent of decrease

B. To find the amount of increase.

1. Subtract the original figure from the new figure.
2. Write as a fraction
    a. the amount of increase as the numerator.
    b. the original amount as the denominator.
3. Change the fraction to a percent.

EXAMPLE: If an amount is increased from 80 to 120. What is the percent of increase?

1. $\begin{array}{r} 120 \\ -\ 80 \\ \hline 40 \end{array}$

2. 40/80 = 1/2

3. $\begin{array}{r} .5 \\ 2\overline{)1.0} \end{array}$

4. .5 = 50%, percent of increase

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ACTIVITY SHEET 5--COMPUTING PERCENTAGES

Directions: Complete the following problems relating to percentages.

A. Changing percents to decimals.

1. 3% =
2. 25% =
3. 130% =
4. $33 \frac{1}{3}\%$ =
5. .01% =

B. Changing decimals to percents.

1. .28 =
2. $.12 \frac{3}{4}$ =
3. .05 =
4. 1.25 =
5. .315 =

C. Changing percents to fractions.

1. 10% =
2. 64% =
3. $12 \frac{1}{2}\%$ =
4. 5% =
5. $87 \frac{1}{2}\%$ =

D. Changing fractions to percents.

1. $\frac{3}{8}$ =
2. $\frac{20}{80}$ =
3. $\frac{17}{22}$ =
4. $\frac{3}{5}$ =
5. $\frac{15}{18}$ =

E. Finding a percent of a given amount.

1. $6 \frac{1}{4}\%$ of \$24.87 =
2. 15% of \$60 =
3. 4.5% of \$65.75 =
4. 35% of \$85.63=
5. $\frac{1}{2}\%$ of 375 =

F. Finding an amount when percent of it is given.

1. 15% of what number is \$30?
2. $33\frac{1}{3}\%$ of what number is \$65?
3. $\frac{1}{2}\%$ of what number is \$24?

4. .3 $\frac{1}{5}$% of what number is $65?

5. 2.5% of what number is $25.65?

G. Finding the percent of decrease or increase.

1. $175 is decreased to $125 =

2. $265 is increased to $300 =

3. $235 is decreased to $175 =

4. $472 is increased to $595 =

5. $50 is decreased to $25 =

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

1. b
2. c
3. b
4. a
5. b
6. a
7. b
8. c
9. a
10. c
11. b
12. b
13. c
14. b
15. a
16. a
17. c
18. c
19. a
20. c
21. c

Activity Sheet 2

A. 1. 2,042
2. 293
3. 530
4. 361
5. 583
6. 9.514
7. 240
8. 709
9. 11,534
10. 584,484

B. 1. 19
2. 4
3. 454
4. 455
5. 1,879
6. 588
7. 7,249
8. 88,788
9. 756,788
10. 188,798

C. 1. 192
2. 2,106
3. 68,558
4. 42,350
5. 149,110
6. 301,301
7. 180
8. 174,967,500
9. 122,915
10. 80,569,000

D. 1. 202
2. 14,054
3. 2
4. $203\ \frac{18}{32}$
5. 302
6. 16,543
7. $530\ \frac{6}{17}$
8. 1,526
9. 2,546
10. 10

Activity Sheet 3

A. 1. 14.274
2. 215.675
3. 566.8509
4. 28.1228
5. 13,5807

B. 1. 1.69
2. .027
3. 24.495
4. 8.879
5. 13.991

C. 1. 1766.8
2. \$131.22095 = \$131.22
3. 1.4735
4. \$586.6196 = \$586.62
5. \$1.1574 = \$1.16

D. 1. 2.01
2. \$8.425 - \$8.43
3. 119.14285
4. 6662.5
5. \$8.70
6. .6
7. .1333 = \$.13
8. \$8.94

Activity Sheet 4

A. 1. $\frac{1}{3}$

2. $\frac{1}{3}$

3. $\frac{3}{5}$

4. $\frac{1}{2}$

5. $\frac{1}{3}$

6. $\frac{5}{12}$

7. $\frac{4}{9}$

8. $\frac{12}{19}$

9. $\frac{2}{3}$

10. $\frac{1}{2}$

B. 1. $\frac{40}{64}$

2. $\frac{2}{4}$

3. $\frac{25}{50}$

4. $\frac{30}{56}$

5. $\frac{14}{48}$

C. 1. $6\frac{2}{3}$

2. 9

3. $4\frac{4}{7}$

4. $6\frac{5}{6}$

5. $1\frac{2}{15}$

D. 1. $\frac{17}{4}$

2. $\frac{59}{4}$

3. $\frac{21}{2}$

4. $\frac{53}{12}$

5. $\frac{4}{3}$

E. 1. $\frac{21}{15} = 1\ \frac{6}{15}$ or $1\ \frac{2}{5}$

2. $\frac{2}{4}$ or $\frac{1}{2}$

3. $\frac{6}{6}$ or 1

4. $\frac{47}{32} = 1\ \frac{5}{32}$

5. $12\ \frac{1}{20}$

6. $16\ \frac{25}{64}$

7. $\frac{20}{30}$ or $\frac{2}{3}$

8. 4

9. $40\ \frac{37}{45}$

10. $\frac{33}{60}$

F. 1. $\frac{1}{3}$

2. $\frac{9}{12}$ or $\frac{3}{4}$

3. $\frac{4}{30}$ or $\frac{2}{15}$

4. $8\ \frac{1}{12}$

5. $12\ \frac{5}{8}$

6. $5\ \frac{20}{35}$ or $5\ \frac{4}{7}$

7. $\frac{1}{16}$

8. $9\ \frac{25}{42}$

9. $\frac{1}{4}$

10. $9\ \frac{31}{40}$

G. 1. $\frac{3}{20}$

2. $\frac{1}{8}$

3. $\frac{1}{12}$

4. $\frac{1}{14}$

5. $\frac{91}{12} = 7\ \frac{7}{12}$

6. $\frac{56004}{5} = 11200\ \frac{4}{5}$

7. $\frac{1}{5}$

8. 17,766

9. $21\ \frac{1}{3}$

10. $\frac{104}{3} = 34\ \frac{2}{3}$

Activity Sheet 4

H. 1. 1

2. $\frac{3}{5}$

3. $\frac{5}{3} = 1\ \frac{2}{3}$

4. $\frac{1}{2}$

5. $\frac{32}{3} = 10\ \frac{2}{3}$

6. $\frac{8}{9}$

I. 1. $\frac{2}{3}$

2. $\frac{1}{25}$

3. 9

4. $\frac{1}{8}$

5. $\frac{9}{65}$

J. 1. .25

2. .2

3. .04

4. .2

5. .625

6. .8

7. 14.263 or 14.26

8. 21513.8

9. .6666 or .67

10. .3333 or .33

Activity Sheet 5

A. 1. .03

2. .25

3. 1.30

4. .333 or .33 $\frac{1}{3}$

5. .0001

B. 1. 28%

2. 12 $\frac{3}{4}$%

3. 5%

4. 125%

5. 31.5%

C. 1. $\frac{10}{100}$

2. $\frac{64}{100}$

3. $\frac{1}{8}$

4. $\frac{5}{100}$

5. $\frac{7}{8}$

D. 1. .375 = 37.5%

2. .25 = 25%

3. .7727 = 77.27%

4. .6 = 60%

5. .8333 = 83.33%

E. 1. $1.55

2. $9

3. $2.958 or 2.96

4. $29.97

5. 1.875 or 1.88

F. 1. $200

2. $195.02

3. $4800

4. $2031.25

5. $1026

G. 1. decreased $50, .2857 or 28.57%

2. increased $35, .13207 or 13.21%

3. decreased $60, .2553 or 25.53%

4. increased $123, .26059 or 26.06%

5. decreased $25, .5 or 50%

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

UNIT TEST

A. Match the terms to the correct definitions by placing the letter in the space provided.

_____ 1. Combining values of two or more numbers to form a larger number.

_____ 2. The number by which you multiply.

_____ 3. The answer to the multiplication problem.

_____ 4. A part of a unit or a number.

_____ 5. The numerator of this fraction is as large or greater than the denominator.

_____ 6. The process of taking a smaller number away from a larger number.

_____ 7. The answers that result from adding numbers together.

_____ 8. This fraction is composed of a whole number and a fraction.

_____ 9. The answer that results from the subtraction of two numbers

_____10. The numbers added together.

_____11. The process of adding groups of numbers a specified number of times.

_____12. The larger number in the subtraction problem.

_____13. Fractions with the same value.

_____14. A fraction which contains a fraction in the numerator and/or in the denominator.

_____15. The smaller number in the subtraction problem.

_____16. The number being multiplied.

_____17. The process of breaking any number into smaller groups of numbers.

_____18. The top number of a fraction.

_____19. A fraction with the larger numerator and denominator than the equivalent fraction.

_____20. The numerator is smaller than the denominator in this fraction.

_____21. The bottom number of a fraction.

_____22. The amount left over in a division problem if the answer is not a whole number.

_____23. The number by which you divide.

_____24. The answer obtained by dividing.

_____25. The line that separates the top number from the bottom number in a fraction.

_____26. The number being divided.

a. Product
b. Improper fraction
c. Mixed number
d. Subtraction
e. Sum
f. Difference
g. Addition
h. Complex fraction
i. Multiplier
j. Fraction
k. Multiplicand
l. Quotient
m. Subtrahend
n. Remainder
o. Equivalent fractions
p. Proper fractions
q. Addend
r. Minuend
s. Numerator
t. Multiplication
u. Higher equivalent
v. Fraction bar
w. Division
x. Dividend
y. Divisor
z. Denominator

B. Identify the true statements when working with whole numbers, by placing a "✓" in the correct space.

1. In addition of whole numbers

_____ a. line up the digits correctly.

_____ b. add from left to right.

_____ c. add from bottom to top.

_____ d. add from right to left.

2. In subtraction of whole numbers

_____ a. place the smaller number on top.

_____ b. line up digits correctly.

_____ c. subtract the smaller number from the larger number.

_____ d. subtract from right to left.

_____ e. check the answer by adding the minuend and difference.

3. In multiplication of whole numbers

_____ a. line up digits correctly.

_____ b. multiply from left to right.

_____ c. any number multiplied by 0 equals 0.

_____ d. multiply the multiplicand into the multiplier.

4. In division of whole numbers

_____ a. divide the dividend into the divisor.

_____ b. divide from left to right.

_____ c. check the answer by multiplying the quotient by the divisor.

_____ d. the answer is the quotient.

C. Place the letter in the space that correctly completes the statements regarding decimals and fractions.

_____ 1. Line up the decimals when

a. dividing
b. adding
c. multiplying
d. subtracting
e. b and d

_____ 2. When multiplying amounts with decimals
   a. line up the decimals.
   b. place the decimal in the product directly below the decimal in the multiplier.
   c. move the decimal two places to the right.
   d. count number of decimal places in problem and insert decimal in product.

_____ 3. If there is a decimal in the divisor
   a. ignore it.
   b. move it to the right until it is outside the divisor.
   c. move it to the left two spaces.
   d. erase it.

_____ 4. When reducing a fraction to its lowest terms
   a. divide the fraction by the smallest number possible.
   b. divide the fraction by the largest number.
   c. multiply the fraction by the number selected.
   d. none of the above.

_____ 5. To raise a fraction to a higher equivalent
   a. divide the fraction by the same number.
   b. multiply the numerator and denominator by the same number.
   c. multiply the fraction times itself.
   d. subtract the fraction.

_____ 6. To compare fractions for highest value
   a. change the fractions to equivalent fractions and compare.
   b. add the fractions together.
   c. multiply the fractions.
   d. none of the above.

_____ 7. To change an improper fraction to a mixed number
   a. change to an equivalent fraction.
   b. divide the denominator by the numerator.
   c. subtract the numerator from the denominator.
   d. divide the numerator by the denominator.

_____ 8. To change a mixed number to an improper fraction

a. add the numbers together.

b. divide the numerator into the whole number.

c. multiply the denominator into the whole number and add the numerator.

d. a and b.

_____ 9. To add or subtract fractions the denominators

a. must be the same.

b. can be different.

c. are added together.

d. are subtracted

_____10. When multiplying fractions

a. cancel cross factors if possible.

b. multiply the numerators together.

c. change mixed numbers to improper fractions.

d. all of the above.

_____11. When dividing fractions

a. invert the divisor and multiply.

b. divide numbers as written.

c. change improper fractions to mixed numbers.

d. none of the above.

_____12. When simplifying complex fractions

a. rewrite the fraction as a division problem.

b. subtract the fractions.

c. invert the fraction in the denominator.

d. a and c

_____13. To change fractions to decimals

a. multiply the numerator and denominator.

b. divide the numerator by the denominator.

c. invert the fraction.

d. all of the above.

D. Describe how percents are changed to fractions.

E. State the procedures for changing fractions to percents.

F. Explain how to change percents to decimals and decimals to percents.

G. List the steps for finding a percent of a given number.

H. Cite the procedures for finding an amount when the percent of it is given.

I. State the steps for finding the percent of decrease or increase.

UNIT VII

COMPUTING ROUTINE MATH TRANSACTIONS

ANSWERS TO UNIT TEST

A.
1. g
2. i
3. a
4. j
5. b
6. d
7. e
8. c
9. f
10. q
11. t
12. r
13. o
14. h
15. m
16. k
17. w
18. s
19. u
20. p
21. z
22. n
23. y
24. l
25. v
26. x

B.
1. a. ✓
   b.
   c. ✓
   d. ✓
2. a.
   b. ✓
   c. ✓
   d. ✓
   e.
3. a. ✓
   b.
   c. ✓
   d.
4. a.
   b. ✓
   c. ✓
   d. ✓

C.
1. e
2. d
3. b
4. b
5. b
6. a
7. d
8. c
9. a
10. d
11. a
12. d
13. b

D. Write the percent as a fraction over a denominator of 100 and reduce to its lowest terms.

E. Divide the numerator by the denominator, carry the answer to three places and change the decimal answer to a percent.

F. Change the percent to a decimal by moving the decimal two places to the left and drop the percent sign. Change a decimal to a percent by moving the decimal two places to the right and adding a percent sign.

G. Change the percent to a decimal and multiply the given amount by the decimal amount.

H. Change the percent to a decimal amount and divide the given amount by the decimal amount.

I. Subtract the new amount from the original amount. Write the amount as a fraction with the decrease or increase as the numerator and the original amount as the denominator. Change the fraction to a percent.

UNIT VIII

PROOFREADING

UNIT OBJECTIVE

After completion of this unit, the student will be able to recognize proofreader's marks and use them in editing. This knowledge will be evidenced through demonstration and successful completion of the unit test.

SPECIFIC OBJECTIVES

After the completion of this unit, the student will be able to:

1. List characteristics of a good proofreader.
2. Identify types of errors.
3. List resources and references.
4. Identify the steps in proofreading.
5. Demonstrate the ability to:
    a. Proofread and recognize errors.
    b. Edit typewritten work, using the proper proofreader's marks.

UNIT VIII

PROOFREADING

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

- A. Preview the unit. Gather resources and references, if necessary, to supplement the unit.
- B. Order slide/tape presentation, Recognizing Proofreader's Marks and Using Them In Editing.
- C. Design a bulletin board to introduce the unit.

II. Objective Sheet

- A. Discuss the unit and specific objectives.
- B. Add objectives for any information added to the unit.

III. Information and Activity Sheets

- A. Discuss the importance of proofreading.
- B. Emphasize the types of errors to look for and the steps to follow in proofreading.
- C. Stress the importance of using resources and references.
- D. Show slide/tape presentation, Recognizing Proofreader's Marks and Using Them In Editing.
- E. Have students complete the activities at the end of the unit. For extra practice, the activities provided with the slide/tape presentation may be duplicated and completed.

IV. Answers to Activities

V. Unit Test

- A. Covers the information presented.
- B. May be used as an additional activity.
- C. Add corresponding questions to any information added to supplement the unit.

VI. Answers to the Unit Test

VII. Resources and References

A. Books

1. OFFICE PROCEDURES
   Harry R. Moon
   MPC Educational Publishers
   3839 White Plains Rd.
   Bronx, NY 10467

2. APPLIED SECRETARIAL PROCEDURES
   Fries, Rowe, Travis, Blockhus
   Gregg/McGraw-Hill Book Co.
   Princeton Rd.
   Hightstown, NJ 08520

3. THE WP BOOK, A REFERENCE MANUAL
   Kutie and Huffman
   John Wiley and Sons, Inc.
   605 Third Avenue
   New York, NY 10158

4. THE REFERENCE GUIDE
   Raloh M. Holmes
   Houghton-Mifflin Company
   Dept. 19
   Box 683
   Hanover, NH 03755

5. ENGLISH STYLE SKILL-BUILDERS
   Cleary and Lacombe
   Gregg/McGraw-Hill
   Princeton Rd.
   Hightstown, NJ 08520

6. SECRETARIAL PROCEDURES AND ADMINISTRATION
   Hanna, Popham, and Tilton
   South-Western Publishing Co.
   5101 Madison Rd.
   Cincinnati, OH 45227

B. AUDIOVISUALS

RECOGNIZING PROOFREADER'S MARKS AND USING THEM IN EDITING
Diane E. Johnson
Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428

UNIT VIII

PROOFREADING

INFORMATION SHEET

I. Characteristics of a good proofreader

   A. Good spelling skills

   B. Knowledge of correct grammar

   C. Ability to use resources and references

   D. Close attention paid to detail

   E. Pride in producing accurate work

   F. Understanding of proofreader's marks

II. Types of errors

   A. Mechanical

      1. Inverted letters

      2. Incorrect letters

      3. Missing letters

      4. Incorrect spacing

   B. Missing words or lines

   C. Incorrect spelling

   D. Capitilization and punctuation

   E. Word division

   F. Author's writing

      1. Incorrect numbers, dates, and figures

      2. Poor format

      3. Poor grammar

      4. Poor content

III. Proofreading and editing hints

   A. Proofread a final copy before removing it from the typewriter.

   B. Remove a rough draft copy from the typewriter to proofread and edit.

- C. Use a pen, pencil, or the forefinger as a guide when proofreading.
- D. Take your time and concentrate.
- E. Use a dictionary and/or reference manuals.
- F. Use proofreader's marks to indicate needed changes and corrections.
- G. Make notes in the margin as you proofread.
- H. Ask the author if you have any questions.
- I. Double-check figures carefully against the handwritten or dictated document.
- J. Proofread names and unfamiliar terms, letter by letter.

IV. Types of resources and references required

- A. Dictionary
- B. Word finder book
- C. Reference guide or manual for clerical workers
- D. Grammar book

V. Steps in proofreading

- A. Read through the entire document, checking for:
  - 1. Placement
    - a. Attractive placement on the page
    - b. Correct margins
  - 2. Format
    - a. Correct sequence of necessary parts
    - b. Logical sequence of information and clear presentation
    - c. Only one subject addressed in each paragraph
  - 3. Content
    - a. All necessary information has been included.
    - b. Any ommissions of letters, words, and phrases that could change the meaning of the document.

c. Accuracy of any figures or facts that could affect the outcome of any action to be taken.

(NOTE: Always double-check.)

4. Neatness of the document

a. Corrections not noticeable

b. No smudges or fingerprints on pages

c. Pages free of creases or wrinkles

B. Check each line of the document for:

1. Spelling

a. Check spellings of names and places.

b. Use a reference book to check all unfamiliar words and words the spelling of which you are unsure.

2. Typographical content

a. Check for transposed letters or words.

b. Watch for letters added or deleted from words and for spaces added or deleted between words.

3. Word division

a. Scan the right margin for words that have been divided, and check these items in a word division manual.

b. Look for parts of words that might appear at the end of one line and repeated at the beginning of the next line.

4. Punctuation

a. Check to see that punctuation rules have been followed.

b. Use a reference manual or grammar book to double-check something that is questionable.

5. Grammar

a. Be sure that the subject and verb in a sentence are in agreement.

b. Check for incomplete sentences.

c. Make sure the correct form of a word has been used (i.e., to, too, two).

PROOFREADER'S MARKS

		EDITED COPY	CORRECTED COPY
∧	Insert	The editor looks for and corrects $\overset{all}{\wedge}$ errors.	The good editor looks for and corrects all errors.
∽	Transpose	The editor good looks for and corercts all errors.	The good editor looks for and corrects all errors.
ℊ	Delete	The good editor looks for and corrects ~~all~~ errors.	The good editor looks for and corrects errors.
....	Do not delete	The good editor looks for and corrects ~~all~~ .... errors.	The good editor looks for and corrects all errors.
≡	Capitalize	the good editor looks for and corrects all errors.	The good editor looks for and corrects all errors.
lc	Lower case	The good $\overset{lc}{\cancel{E}}$ditor looks for and corrects all errors.	The good editor looks for and corrects all errors.
⊙	Insert punctuation	The good editor looks for and corrects all errors⊙	The good editor looks for and corrects all errors.
⁀‿	Bring together	The good editor looks for and corre‿cts all errors.	The good editor looks for and corrects all errors.
#	Leave a space	The good editor$\overset{\#}{/}$looks for and correct all errors.	The good editor looks for and corrects all errors.
←	Move to the left	The good editor looks ← for and corrects all ←errors.	The good editor looks for and corrects all errors.

	EDITED COPY	CORRECTED COPY
→ Move to the right	→The good editor looks for and corrects all errors.	The good editor looks for and corrects all errors.
○ Spell out	The good ed. looks for and corrects all errors.	The good editor looks for and corrects all errors.
ss Single space	The good editor looks for ss and corrects all errors.	The good editor looks for and corrects all errors.
ds Double space	The good editor looks for ds and corrects all errors.	The good editor looks for and corrects all errors.
¶ New paragraph	¶The good editor looks for and corrects all errors.	The good editor looks for and corrects all errors.
→ ← Center on page	→Proofreading Marks←	Proofreading Marks
⌒ No paragraph	secretarial classes. If introduced.	secretarial classes. If introduced.

UNIT VIII

PROOFREADING

ACTIVITY SHEET 1--PROOFREADER'S MARKS

DIRECTIONS: Insert the correct proofreader's mark after each description below.

1. Bring together
2. Center on page
3. Insert
4. No paragraph
5. Single space
6. Capitalize
7. Spell out
8. Lower case
9. Do not delete
10. Double space
11. Move right
12. Transpose
13. New paragraph
14. Leave a space
15. Move left
16. Insert punctuation
17. Delete

UNIT VIII

PROOFREADING

ACTIVITY SHEET 2--USING PROOFREADER'S MARKS

DIRECTIONS: Proofread and edit the following material using the appropriate proofreader's marks. Using plain paper, retype the edited copies with corrections made.

ACTIVITY SHEET 2

MAY 20, 19

Ms Donna McBride
2225 East Randolf Road
Dallas, TX75228

Dear Ms. McBride,

The monthly   meeting of the Secretaries Association of Dallas will be held on Tues., June 10 in the Blue Room of the univeristy Inn, 2167 Main Street, Dallas, Texas. Dinner will be at 7 p.m., and tickets are $6 per person.
   Sara Yarnall will be our guest speaker for the evening. Her topic will be the on merging of word procesing and data processing.

Please let us know by June 5 wehther you will be able to attend.

Sincerely yours,

Joan Leggett
President

tb

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ACTIVITY SHEET 2

May 25,19

Mr. Robert Smith, Pres.
International Word processing
  Association
2427 5th Street
Austin, TX65215

Dear Mr. Smith:

Thank you for accepting our invitaion to speak at the summer inservice workshop on Thursday, August 6. As I mentioned to you,the meeting will be held in Room 206 of the Student Union Bldg. at North Texas State Univ., Denton Texas.

Your indicated that the title of your speach is "Integrating word Procesing into the Classrom. If you decide to change the title, please let me know by July 10

so that I can correct the title in the program.
Your room reservations have been made at the Inn of the South for Auguest 6 and 7. I look forward to seeing you at the m-eting.

Sincerely yours,

Betty Mendoza
Organizer

tb

ACTIVITY SHEET 2

WORD PROCESSING Skills

As the use of word processing in business gorws, the need for qualified personnel increases. Employers are looking for applicants with the following basic skills:

1. Typing skills--a minnimun typing spped of 45 to 55 words per min.; the ability to type from rough drafts, longhand, and machine dictation.

2. Machine transcription Skills-- be familiar with machine transcription techniques and procedures.
3. Proofreading--be familiar with and possess good proofreading techniques.

4. Grammatical skills--the ability to spell, punctuate; and capitalize; the ability to recognize sentence correct structures, paragraphing, and sequencing; and the ability to grasp and understand what is being read.

5. Use of resource material--posses the skill to properly use reference sources.

6. Math skills--possess basic math skills in order to set up charts and statistical tables; to figure production rates, and to determine placement of material on a page.

7. concepts and theory or Word processing--possess the knowledge of what word processing is all about.

If applicants possess these seven basic skills, they are prepared for the business world and also qualified for an entry-level position in work processing.

UNIT VIII

PROOFREADING

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

1. Bring together ⁐
2. Center on page → ←
3. Insert ∧
4. No paragraph ⁓
5. Single space ss
6. Capitalize ≡
7. Spell out ○
8. Lower case lc
9. Do not delete .....
10. Double space ds
11. Move right →
12. Transpose ∽
13. New Paragraph ¶
14. Leave a space #
15. Move left ←
16. Insert punctuation ⊙
17. Delete ↗

Activity Sheet 2

EDITED COPY

lc insert year
MAY 20, 19^

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2225 East Randolf Road
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Activity Sheet 2

CORRECTED COPY

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Activity Sheet 2

CORRECTED COPY

WORD PROCESSING SKILLS

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1. Typing skills--a minimum typing speed of 45 to 55 words per minute; the ability to type from rough draft, longhand, and machine dictation.
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If applicants possess these seven basic skills, they are prepared for the business world and also qualified for an entry-level position in word processing.

UNIT VIII

PROOFREADING

UNIT TEST

A. List the six characteristics of a good proofreader.

1.

2.

3.

4.

5.

6.

B. Place the letter that correctly identifies the types of errors in the space provided.

____1. june 10 1981

____2. Febuary

____3. wehther or not

____4. Ex-ecute

____5. He don't know

a. Mechanical error

b. Word division error

c. Incorrect spelling

d. Author error

e. Capitalization and punctuation error

C. Identify the true statements by placing a ✓ in the space provided.

____1. Proofread a final copy before removing it from the typewriter.

____2. Proofread as fast as you can to save time.

____3. Proofread names and unfamiliar terms letter by letter.

____4. Remove a rough draft copy from the typewriter when proofreading and editing.

____5. Use a paper clip as a guide when proofreading.

____6. Make notes in the margin and use proofreader's marks as you proofread.

____7. Double-check figures.

____8. Do not disturb the author if you have questions.

D. List the four resources you should have available when proofreading.

1.

2.

3.

4.

E. Place the letter that correctly identifies steps to follow when proofreading in the space provided.

____1. When checking for placement errors, you are looking for:

a. sequencing of paragraphs.
b. how the material is placed on the page and if margins are correct.
c. omission of words or phrases.

____2. When checking for format errors, you are looking for:

a. logical sequence of information.
b. omission of letters.
c. typographical errors.

____3. When checking for content errors, you should look for:

a. any information omitted.
b. neatness.
c. word division errors.

____4. When proofreading for neatness, a document should be:

a. free of errors.
b. correct grammatically.
c. free of smudges and wrinkles.

____5. Each line of a document should be proofread for:

a. spelling and typographical errors.
b. grammar and punctuation errors.
c. both a and b.

UNIT VIII

PROOFREADING

ANSWERS TO UNIT TEST

A. 1. A good speller.
   2. Knows correct grammar.
   3. Knows how to use resources and references.
   4. Pays close attention to detail.
   5. Takes pride in producing accurate work.
   6. Knows proofreader's marks.

B. 1. e
   2. c
   3. a
   4. b
   5. d

C. 1. ✓
   2.
   3. ✓
   4. ✓
   5.
   6. ✓
   7. ✓
   8.

D. 1. Dictionary
   2. Word finder
   3. Reference manual or guide
   4. Grammar book

E. 1. b
   2. a
   3. a
   4. c
   5. c

UNIT IX

USING RESOURCES AND REFERENCES

UNIT OBJECTIVE

After completion of this unit, the student will be able to identify and use resources and references available for office workers. This knowledge will be evidenced through demonstration and by successfully completing the unit test.

SPECIFIC OBJECTIVES

After completion of this unit of instruction, the student will be able to:

1. Identify the two types of sources available.
2. List the reasons for using resources and references.
3. Identify the five types of reference books available for use in an office.
4. Identify the three types of resources available for use by an office worker.
5. Identify references available in the school or local library.
6. Identify resources available in the community.
7. Demonstrate the ability to use
   a. A dictionary
   b. A word book
   c. A reference manual for office words

UNIT IX

USING RESOURCES AND REFERENCES

NOTES TO THE INSTRUCTOR

I. Preparation for Unit

   A. Preview the unit. Provide any resources and references necessary to supplement the unit.

   B. Gather resources available in the classroom to aid in the discussion of the information.

   C. Obtain various samples of references books from other sources to aid in the discussion of the information.

   D. Arrange for the students to visit the school or local library. Have the librarian discuss the available sources of information and use of the card catalog.

      (NOTE: Be sure to inform the librarian about the types of references the students will need.)

II. Objective Sheet

   A. Discuss the unit and specific objectives

   B. Add objectives for any information added to the unit.

III. Information and Activity Sheets

   A. Discuss the two types of sources available. Explain the differences between the two.

   B. Discuss the reasons for using resources and references. Provide examples of why they would need to use resources and references.

   C. Discuss the various types of references. Provide examples of the various types of references.

   D. Set aside time for the students to visit the library to complete Activity Sheet 1--USING REFERENCES.

   E. Discuss the types of resources available. Explain the types of information or assistance these resources may provide.

   F. Have students complete the following:

      1. Activity Sheet 2--DETERMINING RESOURCES
      2. Activity Sheet 3--PREPARING A CARD FILE

   G. Provide students with a dictionary, a word book, and a reference manual for completing the following activities:

      1. Activity Sheet 4--USING THE DICTIONARY
      2. Activity Sheet 5--USING A WORD BOOK
      3. Activity Sheet 6--USING A REFERENCE MANUAL

IV. Answers to Activity Sheets

A. Answer sheets are provided.

B. Answers to Activity Sheets 1, 2, and 3 will depend upon the resources and references available.

C. Prepare answers for any activities added.

V. Unit Test

A. Various approaches may be used in testing.

1. Use the test as an additional activity.
2. Give the test upon completion of the unit and activities.

VI. Answers to Unit Test

VII. Resources and References

A. APPLIED SECRETARIAL PROCEDURES, 7th ed.
Fries, Rowe, Travis, and Blockhus
Gregg/McGraw-Hill Book Company
Princeton Road
Highstown, NJ 08520

B. THE SECRETARY, AN INTEGRATED BLOCK PROGRAM, Part 1
Green Sanders, and Tedesco
Gregg/McGraw-Hill Book Company
Princeton Road
Highstown, NJ 08520

C. SECRETARIAL PROCEDURES AND ADMINISTRATION
Hanna, Popham, and Tilton
South-Western Publishing Company
5101 Madison Road
Cincinnati, OH 45227

D. THE REFERENCE GUIDE, A HANDBOOK FOR OFFICE PERSONNEL
Ralph M. Holmes
Houghton Mifflin Company
One Beacon Street
Boston, MA 02107

E. SECRETARIAL OFFICE PROCEDURES, 9th ed.
Oliverio and Pasewark
South-Western Publishing Company
5101 Madison Road
Cincinnati, OH 45227

F. CLERICAL OFFICE PROCEDURES, 6th ed.
Pasewark and Oliverio
South-Western Publishing Company
5101 Madison Road
Cincinnati, OH 45227

G. BUSINESS ENGLISH AND COMMUNICATION, 4th ed.
Stewart, Lanham, Zimmer, and Clark
Gregg/McGraw-Hill Book Company
Princetown Road
Highstown, NJ 08520

UNIT IX

USING RESOURCES AND REFERENCES

INFORMATION SHEET

I. Types of Sources Available

There are many sources available for obtaining information or assistance and may be categorized as follows:

- A. References are books such as:
    - 1. Dictionaries
    - 2. Reference manuals
    - 3. Directories
- B. Resources are people or places who provide information and assistance such as:
    - 1. Libraries
    - 2. Organizations
    - 3. Travel bureaus

II. Reasons for Using Resources and References

- A. To find information
- B. To verify information
- C. To clarify information
- D. To compile information

III. Types of References

Reference books are important to office workers in locating information when it is needed and in performing job duties efficiently and effectively. The types of reference books used by an office worker will depend on the nature of work performed and background information needed. Some of the reference books office workers should have access to are:

- A. Reference manuals for office workers
    - 1. General reference manuals
        - a. Provide general information on office procedures and practices.
        - b. Used as a general reference by all office workers.

2. Specialized reference manuals
    a. Provide specific information on office procedures and practices for specialized fields.
    b. Available for office workers in the following areas:
        (1) legal
        (2) medical
        (3) technical
        (4) word processing
        (5) accounting
        (6) engineering, etc.

B. Dictionaries and word books

1. Desk-size dictionary
    a. Are considered the most comprehensive reference manual on language usage.
    b. Used most frequently to check spelling, to verify pronunciation, and to look up definitions.
2. Word books
    a. Are a quick source to the correct spelling and syllabification of commonly used words.
    b. Used most frequently to verify spelling and division of words.
3. Specialized dictionaries and word books
    a. Deal with the specialized vocabulary used by certain professions (engineering, legal, medical, foreign languages, etc.)
    b. Include the spelling, division, and pronunciation of words.
4. Thesaurus book
    a. Is a collection of words and phrases arranged according to ideas or concepts.
    b. Used to find the word or words to express exactly what you mean.

C. Directories

1. Provide alphabetical listings of names and addresses of people in a particular profession, business, or industry in a given geographical area.

2. Provide assistance in finding name, address, and telephone number of people or companies.

3 Types of directories

   a. Telephone directories
   b. City directories
   c. Government directories
   d. Business and industry directories

D. Encyclopedias

1. Provide information on a wide variety of subjects.

2. May provide specific or general information about topics.

E. General references

Additional references that provide information essential to an office worker are:

1. National ZIP Code Directory--includes information on how to use the ZIP code, address abbreviations, post office and ZIP codes.

2. Postal Manual--includes postal regulations, rates, and services.

3. Hotel/Motel Red Book--includes the following information:

   a. Names of hotels and motels by city and state.
   b. Location and telephone number.
   c. Number of rooms and services provided.
   d. Room rates.

4. Official Airline Guide--provides a comprehensive listing of all flight information.

5. Grammar and Style Books--used to determine correct grammar and writing style.

6. Indexes

   a. Used to locate information on particular subjects.
   b. List contents of books and periodicals.

7. Almanacs--provide a wide range of information about important events, census information, etc.

8. Atlas--provides geographical and statistical information.
9. Trade and professional journals--provide information for a particular trade or profession, such as educational journals, business and office publications.
10. Company procedures manual--provides information on rules, regulations, and procedures established for a particular company (travel policies, sick leave policies, etc.)

IV. Resources for Information

In addition to reference books, information or assistance may also be obtained from various resources available at the local, state, and national levels.

A. Local resources
   1. Chamber of Commerce
   2. U. S. Post Office
   3. City and County offices
   4. Better Business Bureau
   5. Professional and service organizations
   6. Library
   7. Information and referral agency
   8. Other businesses

B. State resources
   1. Government agencies
   2. Tourist information bureaus
   3. Colleges, and Universities
   4. Professional and service organizations

C. National resources
   1. Government agencies
   2. Professional and service organizations
   3. Other sources

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 1--USING REFERENCES

DIRECTIONS: Visit your school or local library to determine sources available for finding the following information.

(NOTE: If the library does not have the source, write NA [not available] in the space.)

1. Famous quotations____
2. Postal and shipping information________________________________
3. Parliamentary procedures________________________________
4. Information on books printed in the U. S.________________________
5. Information about prominent Americans________________________
6. Information regarding the location of a city, its industries, or its geographic characteristics________________________
7. Verification or location of factual information, memorable dates, facts about politics, sports, etc. ________________________
8. Information on grammar and writing style________________________
9. Information on office procedures and practices____________________
10. Information about federal government branches____________________

UNIT IX

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 2--DETERMINING RESOURCES

DIRECTIONS: Contact resources available in your community and prepare a list of these resources with the information or assistance they may provide.

(NOTE: Use the list provided in the information sheet as a guide.)

UNIT IX

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 3--PREPARING A CARD FILE

DIRECTIONS: Prepare a card file of the various resources and references available in your community. Use Activity Sheets 1 and 2 in preparing these cards. Include the following information on each card.

1. Type of information or help provided.
2. Reference or resource available

Alphabetize the cards using the item shown on the first line and file in a desk-top file box. This card file will be helpful as a reminder of where you may find special information, when you need it.

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 4--USING THE DICTIONARY

DIRECTIONS: Using a desk-size dictionary, complete each of the parts below.

A. In the spaces provided, write the language from which the following words are derived.

1. a la mode ____________________
2. medula ____________________
3. melanocyte ____________________
4. flamenco ____________________
5. graduate ____________________

B. Using the space provided divide the following words into syllables.

1. humectant ____________________
2. tomato ____________________
3. refrigerator ____________________
4. boustrophedon ____________________
5. constituency ____________________

C. In the space provided, write a short definition for the following words.

1. doctylology ____________________
____
2. CRT ____________________
____
3. homonym ____________________
____
4. relevant ____________________
____
5. yester ____________________
____

D. In the space provided, indicate the part(s) of speech for the following words.

1. restrictive ______
2. patience ______
3. lengthen ______
4. acheval ______
5. fittingly ______

E. Answer each of the questions below.

1. Who was Thomás Estrada Palma?

______

2. Who is Taylor Caldwell?

______

3. Where is Cozumel located?

______

______

4. What is the population of Denmark?

______

5. Where is Columbia Bible College located?

______

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 5--USING A WORD BOOK

DIRECTIONS: Using a word book, complete each of the parts below.

A. In the spaces provided, rewrite the word indicating with a hyphen the first acceptable division point.

1. basically________________________________
2. pamphlet ________________________________
3. negligible_______________________________
4. cylinder_________________________________
5. triplicate_______________________________

B. In the spaces provided, write the plural form of the following words.

1. apiary_______________________________
2. hierarchy____________________________
3. miscellany____________________________
4. memorandum____________________________
5. goose________________________________

C. In the spaces provided, write the alternative for the spelling of the words below.

1. judgment_______________________________
2. theater _______________________________
3. catalogue ______________________________
4. accessary______________________________
5. freeby_________________________________

USING RESOURCES AND REFERENCES

ACTIVITY SHEET 6--USING A REFERENCE MANUAL

DIRECTIONS: Using a reference manual for office workers, complete each of the parts below.

A. In the space provided, write the abbreviations for the following words.

1. Maine ______
2. corporation ______
3. American Bar Association ______
4. millimeter ______
5. amount ______
6. before noon ______
7. Thursday ______
8. Federal Housing Administration ______
9. building ______
10. Master of Education ______

B. Answer the following questions regarding the preparation of business correspondence.

1. Where are the reference initials typed on a letter?
______
______
2. What lines are omitted when preparing the AMS simplified style letter? ______
______
3. What are the two basic punctuation styles used in business letters? ______
______
4. What is the correct complimentary close for a letter addressed to a United States senator? ______
______
5. What is the purpose of the attention line? ______
______

C. Answer the following questions regarding the division and hyphenation of words and the use of numbers.

1. What is the rule for dividing compound words? ________________

   ____

2. What is the rule expressing numbers over ten? ________________

   ____

3. What is the rule for expressing very large amounts of money?

   ____

   ____

4. What is the rule for expressing decimal numbers? fractions?

   ____

   ____

5. What is the rule for expressing scientific measurements?

   ____

   ____

UNIT IX

USING RESOURCES AND REFERENCES

ANSWERS TO ACTIVITY SHEETS

Activity Sheet 1

Answers will vary depending on the sources available. Some of the possible references are:

1. Bartlett's Familiar Quotations; Home Book of Quotations; The Oxford Dictionary of Quotations; International Encyclopedia of Quotations.
2. Bullinger's Postal and Shipper's Guide for the United States and Canada; Director of International Mail; National ZIP Code Directory; Postal Manual.
3. Robert's Rules of Order; Parliamentary Procedure Simplified.
4. Books in Print, USA; Business Books in Print; Cumulative Book Index.
5. Who's Who in America; Webster's Biographical Dictionary; Dictionary of American Biography.
6. The Rand McNally Commercial Atlas and Marketing Guide; McGraw-Hill International Atlas; National Geographic Atlas of the World.
7. The World Almanac and Book of Facts; Information Please Almanac; Reader's Digest Almanac and Yearbook.
8. Dictionary of Modern English Usage; A Manual of Style; The Written Word.
9. Reference Manual for Office Workers; Complete Secretary's Handbook; The Secretary's Handbook.
10. Congressional Directory; U. S. Government Manual.

Activity Sheet 2 and 3

Answers will vary depending upon the resources and references available.

Activity Sheet 4

A. 1. French, F

2. Latin, L

3. International Scientific Vocabulary, ISV

4. Spanish, Sp.

5. Medieval Latin

B. 1. hu·mec·tant

2. to·ma·to

3. re·frig·er·a·tor

4. bou·stro·phe·don

5. con·stit·u·en·cy

C. 1. doctylology--the art of communicating ideas by signs made with the fingers.

2. CRT--cathode-ray tube

3. homonym--one of two or more words spelled and pronounced alike but different in meaning.

4. relevant--having significant and demonstrable bearing upon the matter at hand.

5. yester--of or relating to yesterday.

D. 1. adjective (adj.)

2. noun (N)

3. verb (vb)

4. adverb (adv.)

5. adverb (adv.)

E. 1. First president of Cuba.

2. An American author.

3. Island southeast of Mexico off Northeast coast of Quintant Roo.

4. 4,970,000 based on Webster's New Collegiate Dictionary. Answer may vary depending on the dictionary used.

5. Columbia, South Carolina.

Activity Sheet 5

A. 1. bas-ically

2. pam-phlet

3. neg-ligible

4. cyl-inder

5. trip-licate

B. 1. apiaries

2. hierarchies

3. miscellanies

4. memorandums or memoranda

5. geese

C. 1. judgement

2. theatre

3. catalog

4. accessory

5. freebie

Activity Sheet 6

A. 1. ME
   2. corp.
   3. ABA
   4. mm
   5. amt.
   6. a.m.
   7. Thurs.
   8. FHA
   9. bldg.
   10. M.Ed.

B. 1. At the left margin, a double-space below the writer's name and title.
   2. The salutation and complimentary close.
   3. Open and mixed punctuation.
   4. Very truly yours, or Sincerely yours,
   5. To direct the letter to a specific person or department not named in the inside address.

C. 1. Divide between the compound elements.
   2. Use figures for numbers over ten.
   3. Use a combination of figures and words.
   4. Always use figures for decimal numbers. Precede decimal fractions by a zero.
   5. Use figures for scientific measurements.

UNIT IX

USING RESOURCES AND REFERENCES

UNIT TEST

A. Match the correct term associated with reference books to the correct definition by placing the letter in the appropriate space.

_____1. Provides information about general office procedures and practices.

_____2. Used as a quick source for determining the spelling and division of words.

_____3. Provides alphabetical listings of names and addresses of people.

_____4. Is a comprehensive reference manual on language usage.

_____5. Provides information on a wide variety of subjects.

_____6. Provide specific information on office procedures and practices for specialized fields.

_____7. Provides a collection of words and phrases arranged according to ideas or concepts.

_____8. Provides information on postal regulations, rates, and services.

_____9. Provides a comprehensive listing of all flight information.

____10. Provide a wide range of information about important events, census information, etc.

____11. Provides information on hotels and motels.

____12. Provides geographical and statistical information.

____13. Provides information on using ZIP codes.

____14. Provides information on rules and procedures for a particular company.

____15. Used to determine correct grammar and writing style.

____16. Provides information for a particular trade or profession.

____17. Used to locate information on a particular subject and list contents of books and periodicals.

A. Almanacs

B. Atlas

C. Company Procedure Manual

D. Desk-top dictionary

E. Directories

F. Encyclopedias

G. General reference manual

H. Grammar and style books

I. Hotel/Motel Red Book

J. Indexes

K. National ZIP Code Directory

L. Official Airline Guide

M. Postal Manual

N. Specialized reference manuals

O. Thesaurus

P. Trade and professional journals

Q. Word Book

B. List the two types of sources from which information or assistance may be obtained.

1.

2.

C. State the four reasons for using resources and references.

1.

2.

3.

4.

D. List the three categories of resources from which information or assistance may be obtained.

1.

2.

3.

UNIT IX

USING RESOURCES AND REFERENCES

ANSWERS TO UNIT TEST

A. 1. G
2. Q
3. E
4. D
5. F
6. N
7. O
8. M
9. L
10. A
11. I
12. B
13. K
14. C
15. H
16. P
17. J

B. 1. Resources
2. References

C. 1. To find information
2. To verify information
3. To clarify information
4. To compile information

D. 1. Local level
2. State level
3. National level

UNIT IX

USING RESOURCES AND REFERENCES

ANSWERS TO UNIT TEST

A. 1. G
2. Q
3. E
4. D
5. F
6. N
7. O
8. M
9. L
10. A
11. I
12. B
13. K
14. C
15. H
16. P
17. J

B. 1. Resources
2. References

C. 1. To find information
2. To verify information
3. To clarify information
4. To compile information

D. 1. Local level
2. State level
3. National level